

STATE OF MINNESOTA

DISTRICT COURT

COUNTY OF RAMSEY

SECOND JUDICIAL DISTRICT

- - - - -  
Neil Humphreys, Lona Jensen, File No. 62-CV-13-7709  
individually and as husband  
and wife,

Plaintiffs,

vs.

**VOLUME XVII**

Owens-Illinois, Inc.,

**OCTOBER 17, 2014  
MORNING SESSION**

Defendant.

- - - - -  
The above-entitled matter came duly on for  
jury trial before the Honorable John H. Guthmann,  
Judge of District Court, on the 17th day of October  
2014, at the Ramsey County Courthouse, 15 West Kellogg  
Boulevard, St. Paul, Minnesota.

A P P E A R A N C E S

Patrick DeBlase, Esq., Curtis M. Glaccum,  
Esq., and Michael R. Strom, Esq., appeared for and on  
behalf of the Plaintiffs.

Patrick T. Tierney, Esq. and John D.  
Cosmich, Esq., appeared for and on behalf of the  
Owens-Illionis, Inc.

Kathleen M. Conlee - Court Reporter

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1                   (Whereupon, the following proceedings were  
2                   duly had outside the presence of the jury on October  
3                   17, 2014 at approximately 9:03 a.m.)

4                   THE COURT: Everyone ready to go?

5                   MR. DE BLASE: Yes, Your Honor.

6                   MR. COSMICH: Yes, Your Honor.

7                   MR. TIERNEY: Ready to go home.

8                   THE COURT: I didn't finish the sentence,  
9                   I'm sorry. A couple things I want to put on the  
10                  record: One, I had requested the plaintiffs to mark  
11                  and offer the Lona Jensen deposition as it was  
12                  presented to the jury so we have an actual transcript  
13                  in addition to the thumb drive, so let's take care of  
14                  that sometime today.

15                  The other thing I wanted to do was put on  
16                  the record the side-bar discussion we had late  
17                  yesterday with regard to the EPA document that was  
18                  discussed by Dr. Gregory and Mr. Cosmich in  
19                  connection with the issue of the definition of toxic.  
20                  The court's ruling permitting the questioning was  
21                  based upon qualification of the document as a learned  
22                  treatise as an exception to the hearsay rule. It's  
23                  also a type of state-of-the-art argument that the  
24                  terminology of the time was part of the  
25                  state-of-the-art in the industry at the time, or in

1 industry at the time, and for those two reasons, the  
2 objection was overruled. And if anyone wants to put  
3 anything else on the record to supplement that, they  
4 may.

5 MR. COSMICH: Only that it was also  
6 defense's position it was a government publication  
7 but we also -- the court was not convinced of that, I  
8 think.

9 THE COURT: Well, I don't recall that  
10 coming up as a separate exception to the hearsay  
11 rule, but --

12 MR. DE BLASE: Well, it's my understanding,  
13 Your Honor, that when we're talking about  
14 state-of-the-art notice, if you will, we're not  
15 offering documents for the truth of the matter  
16 asserted, so therefore it's substantive nonhearsay,  
17 all the state-of-the-art stuff. But when we're  
18 talking postexposure, 1958 and beyond, and we're  
19 talking about other issues like causation or other  
20 opinions, well, that's something that has to come in  
21 through an expert. It can't come in through  
22 documents submitted, shown to the jury and admitted  
23 into evidence. That is still hearsay. I cannot  
24 cross-examine a document. A learned treatise isn't  
25 necessarily admitted as evidence. I mean --

1                   THE COURT: A learned treatise can be shown  
2                   to the jury. This particular document wasn't  
3                   admitted as evidence as an exhibit, but the contents  
4                   of the document were shared with the jury, which is  
5                   exactly what the hearsay exception talks about. In  
6                   addition, the fact that the document is dated after  
7                   the events doesn't mean that it's not relevant to the  
8                   issue of state-of-the-art. In fact, the document  
9                   itself was describing the state-of-the-art in a  
10                  previous era, which is exactly why it was relevant to  
11                  the point that was being made by the defense.

12                 MR. DE BLASE: Sure. And that's, if you  
13                 will, Your Honor, the opinion of that document after  
14                 the time. In other words, somebody during the time  
15                 period opening up a document necessarily has the  
16                 document to look at. Postexposure time, 1958 and  
17                 beyond, well, that's, you know, if somebody's  
18                 commenting on what was known or knowable before that  
19                 time, that's subject to cross-examination. One  
20                 cannot cross-examine a document that's produced later  
21                 and talking about things that happened in the past.

22                 THE COURT: It was a learned treatise  
23                 relied upon by the expert who formed an opinion.

24                 MR. DE BLASE: I understand the court's  
25                 position.

1                   THE COURT: And I think the plaintiff has  
2                   been doing that throughout the case. And I just  
3                   wanted to make a record of our side bar because it  
4                   wasn't on the record.

5                   MR. DE BLASE: Sure. But just for the  
6                   record, Your Honor, just so the record is complete, I  
7                   don't believe I have shown the jury any documents  
8                   post-1958, certainly not over objection in this  
9                   trial. I don't think I've shown, I mean, other than  
10                  things that have been agreed on, like the Social  
11                  Security records. I mean --

12                 THE COURT: There have been all kinds of  
13                 treatises postdating 1958 that have been put in for  
14                 purposes of the state-of-the-art, and this document  
15                 is in that same category.

16                 MR. DE BLASE: Right. I've never shown the  
17                 contents of those books, Your Honor. I've only shown  
18                 what, you know, that they are books and that the  
19                 state-of-the-art is contained therein, and that is  
20                 the basis of the chapter -- Dr. Lemen wrote the  
21                 state-of-the-art chapter and the epidemiology chapter  
22                 in the asbestos book, but I didn't crack it open and  
23                 start going through --

24                 THE COURT: No, but the contents were  
25                 shared with the jury. If you paraphrase the contents

1 or quote the contents, that isn't any different than  
2 putting it on the screen.

3 MR. DE BLASE: Understood, Your Honor, but  
4 that's not what Dr. Lemen did. He testified as to  
5 his opinions in the case, and his bases are the  
6 articles that are contained in the books and  
7 treatises. Thank you.

8 THE COURT: Okay.

9 MR. STROM: Your Honor, the other point  
10 that we made at the time -- and you've made your  
11 ruling, the evidence has come in, it's purely for the  
12 record -- is that we objected that EPA document  
13 reporting a problem with a landfill full of asbestos  
14 superfund site does not qualify as a learned treatise  
15 at all. It's simply a publication by the EPA  
16 discussing something that happened. It was in --  
17 somewhat akin to a newspaper article discussing what  
18 had happened. It just happened to be on EPA  
19 letterhead. It also was not a document discussing  
20 the definition of toxic or what it meant. It was  
21 simply an offhand comment, and it also referred to, I  
22 mean, not coincidentally, to 1972 when the EPA and  
23 the government agencies started regulating asbestos,  
24 which they hadn't done before.

25 So it was very misleading when they're

1 saying toxic, nontoxic. They're talking about  
2 whether or not something's regulated or not  
3 regulated, and their inability to cross-examine on  
4 that particular point was I think part of the  
5 problem.

6 THE COURT: Well, you will have your chance  
7 to cross-examine the witness who formed the opinion  
8 and the strength and weight to be given to this  
9 particular resource that he used in forming that  
10 opinion. I gave the plaintiff the opportunity to  
11 cross-examine Dr. Gregory before it was put up on the  
12 screen, and that opportunity was passed upon. You  
13 still can cross-examine him because the direct  
14 examination is taking place.

15 Your characterizations of the document are  
16 rather hollow. They just go to the weight in light  
17 of the fact that there's unopposed testimony from Dr.  
18 Gregory that it's a learned treatise and Rule 803(18)  
19 allows the statements to be read into the, read into  
20 evidence but not admitted as exhibits. That's  
21 exactly what happened. And that's treating it as an  
22 exception to the hearsay rule. If it's treated as  
23 state-of-the-art as Mr. DeBlase suggests, not that he  
24 agrees with this characterization, but as he properly  
25 suggests, if it's state-of-the-art, that goes to



1 notice and not to truth of the matter asserted. It's  
2 not hearsay at all. So for those two reasons, I  
3 permitted the defense to proceed.

4 MR. STROM: We understand the court's  
5 ruling and we're ready to move on. Thank you.

6 THE COURT: Okay. Let's bring in the jury.

7 (Whereupon, the following proceedings were  
8 duly had in open court in the presence of the jury:)

9 THE COURT: Good morning. Have a seat.  
10 Dr. Gregory, you can come back and resume your seat.

11 Mr. Cosmich, you can continue with your  
12 direct exam.

13 MR. COSMICH: Thank you, Your Honor.

14 CONTINUED DIRECT EXAMINATION

15 BY MR. COSMICH:

16 Q Good morning, Dr. Gregory.

17 A Good morning.

18 Q When we left off yesterday we had been talking about  
19 dose and toxicity. Do you recall that?

20 A Yes.

21 Q Where I want to go now is back to the concept of a  
22 threshold limit value briefly, okay?

23 A Yes.

24 Q At any point did the ACGIH or any other entity ever  
25 have a separate TLV for asbestosis and cancer?

1 A No, they did not.

2 Q Some mention has been made about suggestions by a Dr.  
3 Stockinger about a safety factor. Are you aware of  
4 discussions with respect to a safety factor?

5 A Yes, I am.

6 Q Do you know Dr. Stockinger?

7 A Yes, Dr. Stockinger was a guest lecturer at the  
8 University of Cincinnati while I was there working on  
9 my master's degree in industrial hygiene. In fact,  
10 he worked across the town of Cincinnati at the Public  
11 Health Service. At that time it was called the  
12 National Institute of Occupational Safety and Health,  
13 or NIOSH.

14 Q At any point are you ever aware of Dr. Stockinger  
15 suggesting a safety factor or a lowering, or a  
16 different level of TLV for asbestos?

17 A No.

18 Q Are you aware of publications by the American  
19 Industrial Hygiene Association called Quarterly  
20 Reports?

21 A Yes.

22 Q Are those the types of materials that hygienists such  
23 as yourself would rely upon and read?

24 A Yes.

25 Q Would you consider them to be authoritative?

1 A Yes.

2 Q If there were writings by Dr. Stockinger and such at  
3 issue, would that be authoritative and something that  
4 would be relied upon by folks such as yourself out in  
5 the field?

6 A Certainly, yes.

7 Q Are you aware of the publication by Dr. Stockinger in  
8 the American Industrial Hygiene Association's  
9 Quarterly Report in September of 1956?

10 A Yes, I am.

11 MR. DE BLASE: Your Honor, may I have an  
12 opportunity -- I object. I haven't seen this. I'd  
13 like to see it. It hasn't been shown to me.

14 MR. COSMICH: It's literature just like you  
15 mentioned.

16 THE COURT: Okay, take a look at it.

17 MR. DE BLASE: I have it. It's fine; go  
18 ahead.

19 THE COURT: Proceed.

20 BY MR. COSMICH:

21 Q Do you recall Dr. Stockinger specifically writing  
22 about his view of asbestos and cancer in that report?

23 A Yes, I do.

24 Q You know, on page 342 Dr. Stockinger talks about Dr.  
25 Doll, there's been a lot of discussion about Dr.

1 Doll?

2 A Correct.

3 Q This is 1956, right after Dr. Doll's publication  
4 comes out, correct?

5 A Correct.

6 Q Dr. Stockinger goes on to say: With such relatively  
7 small numbers of cases, one must be extremely  
8 cautious in drawing the conclusion of a causal  
9 relationship between exposure and the disease.

10 Do you recall reading that?

11 A Yes.

12 Q Further, the question to resolve then in the asbestos  
13 exposures is whether a tenfold greater incidence of  
14 lung cancer is large enough to be significant when  
15 dealing with small samples of this sort. Before a  
16 final decision is reached it would seem well to wait  
17 until a more impressive number of cases has been  
18 documented.

19 What is your interpretation of what Dr.  
20 Stockinger is telling us there?

21 A Well, basically he's stating there's not enough  
22 scientific evidence to conclusively conclude that  
23 asbestos results in an increased rate of lung cancer  
24 among exposed workers at that time. That was the  
25 state-of-the-art of thinking during that time period.

1 Q And he goes on. We won't read it all, but toward the  
2 end he refers to asbestos as a fibrous form of  
3 mineral?

4 A Correct.

5 Q And the ACGIH, as we established before when they had  
6 the threshold limit values, categorized asbestos as a  
7 mineral dust as opposed to a toxic dust, correct?

8 A That's correct.

9 Q Is there any indication from Dr. Stockinger's writing  
10 in 1956 that would indicate to you that he was  
11 recommending a safety factor for asbestos with  
12 respect to the TLV?

13 A No, he was not recommending one at that time.

14 Q Some mention was also made about a publication by the  
15 Manufacturing Chemists Association. Do you recall  
16 reading about that before?

17 A Yes.

18 Q And are you familiar with that publication?

19 A Yes.

20 Q And whether or not warnings for certain products  
21 should be issued?

22 A Correct.

23 Q Do you recall that?

24 A I sure do.

25 Q Was asbestos ever included in that recommendation or

1 that association's publication?

2 A No, it was not.

3 Q But they did suggest a lot of warnings for other  
4 types of materials that were carcinogens, correct?

5 A That's correct.

6 Q I want to move to another area. We've talked a lot  
7 about the types of controls that were known about or  
8 knowable in the field of industrial hygiene for  
9 controlling dust, okay? What types of controls would  
10 have been known about in the 1950s at a work site to  
11 control dust?

12 A Well, basically they fall into three categories:  
13 Engineering controls, which involves the use of  
14 ventilation to remove contaminated air away from the  
15 employees' breathing zone or the area that the  
16 employees are working. So engineering controls, and  
17 there's various other types of engineering controls,  
18 but ventilation is the primary one.

19 The other category is called work practice  
20 or administrative controls where you use methods such  
21 as wetting down a material to prevent it from  
22 becoming airborne, or you reduce the time that you're  
23 working with the material so that your exposure  
24 duration is not as long. So administrative controls  
25 vary, and there's many different types of them.

1                   And then the other major category includes  
2           personal protective equipment which is the wearing of  
3           respirators or respiratory devices, either reusable  
4           respirators or dust masks, disposable respirators  
5           that filter out the fibers or the dust as you're  
6           working and breathing in that particular area.

7       Q   And these are all controls that were state-of-the-art  
8           in the 1950s?

9       A   Yes.

10      Q   And had been written about -- we're not going to  
11           rehash it -- but since Merewether, et al. in the  
12           1930s?

13      A   Yes, they even go back farther than that, yes.

14      Q   And published by industrial hygienists like Dr.  
15           Brandt and others in authoritative journals?

16      A   Yes.

17      Q   And written about in industrial hygiene Quarterly  
18           Reports?

19      A   Correct.

20      Q   With respect to dust at a work site, in order to know  
21           whether or not the dust is approaching a threshold  
22           limit or a certain exposure level, how do you find  
23           that out?

24      A   You have to do industrial hygiene air monitoring  
25           using a device similar to what I described to the

1 jury yesterday where you have a filter or an  
2 impinger. In the old days they used impingers, which  
3 is nothing more than a little flask that you bubble  
4 air through a water solution. But the new technology  
5 in the late '60s was the filter that you attached to  
6 the lapel to represent the employee's breathing zone,  
7 and you connect that to a battery-powered pump that  
8 then draws air through that filter, and all of the  
9 dust and the fibers collect on that filter. And then  
10 that is analyzed and counted by people who are  
11 analytical chemists or those who are trained in  
12 counting asbestos fibers.

13 Q Was there a mechanism to do that in the 1950s?

14 A Oh, yes.

15 Q Also written about in a lot of journals that were  
16 discussed in this case?

17 A Oh, yes.

18 Q In your opinion, should employers provide a safe  
19 place to work?

20 A Oh, yes. There's no question about it. When you  
21 hire an employee you take full responsibility because  
22 you are the one that is paying for their labor, but  
23 you're not paying for them to get hurt or to suffer  
24 any overexposures. All you are entitled to is their  
25 labor. When they leave you at the end of that day



1           you pay them, but they shouldn't be taking in  
2           excessive amounts of chemicals home in their body  
3           that are going to result in adverse health effects.

4                     And the employer is the one that has the  
5           total control over the workplace. They hire the  
6           people. They control the people. They control the  
7           material. They control the exposure conditions.  
8           They control the work practices. They control the  
9           procedures. They have total control over their  
10          employees. Only employers have not only the control  
11          but the ability and the resources to prevent  
12          overexposure to their employees.

13       Q    You talk about the particular work practices and  
14           controls. Why are those important in how much  
15           exposure would occur at a work site in the 1950s, or  
16           with asbestos, with asbestos?

17       A    Yes. Those controls are the only effective ways of  
18           reducing an employee's exposure to asbestos or any  
19           other chemical. And the employer is the one that has  
20           the ability to implement and require the use of those  
21           controls, and to monitor and police those controls to  
22           make sure that they remain effective while the  
23           employee is performing his or her job.

24       Q    And do the work practices, how the products are  
25           handled, affect how much dust may be in a given

1 application?

2 A Oh, definitely. All of those controls, the  
3 engineering controls, the administrative or work  
4 practice controls and respiratory controls, reduce  
5 exposures that the employee will receive while  
6 performing their job.

7 Q In any work site such as was described by Mr.  
8 Humphreys, there are a lot of different hazardous  
9 materials?

10 A Yes.

11 Q And this control doesn't just relate to asbestos, it  
12 would be for everything, correct?

13 A Exactly, everything that's potentially hazardous.

14 Q Should an employer who is conducting a certain  
15 activity or a subcontractor of a specialized field,  
16 should they know about the hazards associated with  
17 the type of work that they're holding themselves out  
18 to do?

19 A Yes, they should. As an employer you take that  
20 responsibility when you hire people to perform a  
21 task. You take that responsibility of knowing what  
22 they're doing, what they're working with, and what  
23 the potential health effects of those particular  
24 products are going to be so that you can make sure  
25 they're not overexposed and suffer adverse health

1 effects.

2 Q And Dr. Gregory, from an industrial-hygiene  
3 perspective, does this responsibility to provide a  
4 safe workplace and protect workers depend on the size  
5 of the employer?

6 A No. The engineering, administrative and personal  
7 protective equipment controls are controls that every  
8 employer has available to them, whether they have one  
9 employee or thousands of employees, so they're  
10 available and always have been available to  
11 employees.

12 Q Is that a concept that OSHA applies even today?

13 A Yes, when OSHA passed their Occupational Safety Act  
14 of 1970, it made it very clear that it was the  
15 employer's responsibility to protect each and every  
16 employee.

17 Q Dr. Gregory, I want to show you one more exhibit  
18 that's been entered into evidence.

19 MR. COSMICH: May I approach, Your Honor?

20 THE COURT: You may.

21 BY MR. COSMICH:

22 Q Dr. Gregory, I have Exhibit 15. It's been entered  
23 into evidence. It's the specifications from the work  
24 site. Are you familiar with that?

25 A Yes, I am.

1 Q I want to turn to one of the provisions and see if  
2 this is consistent with what you're talking about. I  
3 don't know if you can read it there. Under section  
4 E, labor: The insulation contractor shall furnish  
5 all necessary labor to perform properly the work  
6 covered by these specifications. He shall adopt all  
7 precautions to prevent injury to persons and  
8 property. Did I read that correctly?

9 A Yes, you did.

10 Q What type of precautions to protect injury to persons  
11 would be available to the insulation subcontractor in  
12 the summer of 1957 when this contract was going on?

13 A All the engineering work practice, administrative and  
14 personal protective equipment controls that I've  
15 previously discussed were available at that time.

16 Q And from your review of Mr. Humphreys' testimony and  
17 the depositions, are you aware of whether or not  
18 Mr. Humphreys' employer instituted any of those  
19 controls?

20 A There was no evidence that any of those controls were  
21 used during the time period that Mr. Humphreys worked  
22 at that power plant during the summer of '57.

23 MR. COSMICH: Your Honor, those are all the  
24 questions I have.

25 THE COURT: All right. Cross-examination.

1 MR. DE BLASE: Thank you, Your Honor.

2 CROSS-EXAMINATION

3 BY MR. DE BLASE:

4 Q Good morning, Dr. Gregory. How are you?

5 A Good. Good morning, and I'm great, thank you.

6 Q Let's start where we left off. All right, give the  
7 projector some time to warm up.

8 The article, Industrial Hygiene Quarterly,  
9 you were shown that on direct just now?

10 A Yes.

11 Q That was -- this is by Stockinger commenting on the  
12 Dr. Doll article, 1955, right?

13 A That's correct.

14 Q And something we didn't read was the article by  
15 Cartier above that section, right? We heard about  
16 Cartier from Dr. Lemen in this trial as writing a  
17 paper concerning asbestos in cancer. Are you  
18 familiar with that paper?

19 A No, I'm not.

20 Q Well, let's read what it says here: Cartier studying  
21 over a nine-year period involving 4,000 asbestos  
22 miners in Canada, involving 128 cases of asbestosis,  
23 40 of them with autopsies, found six of these have  
24 bronchogenic carcinoma. Seven cases of lung cancer  
25 were found among asbestos miners with no asbestosis.

1                   There's been some talk in this trial about  
2                   asbestosis being needed to have lung cancer. Is this  
3                   an indication to you as an industrial hygienist as a  
4                   professional in safety and industrial engineering,  
5                   that Cartier's reporting there's this question about  
6                   having lung cancer without having asbestosis?

7       A    I'm not familiar with that particular study, but just  
8            because you have lung cancer without asbestosis  
9            doesn't mean that it was caused by asbestos or  
10           exposure. So I'd have to see the whole study,  
11           because when you're doing an epidemiological study --  
12           and I'm not sure that that even qualifies as an  
13           epidemiological study -- but you have to rule out  
14           other potential causes of lung cancer, for example,  
15           the most prevalent cause, cigarette smoking, so --

16   Q    Doctor Lemen has testified in this case that it is an  
17           epidemiological study. Do you know Dr. Lemen?

18   A    Yes.

19   Q    He's an epidemiologist, right?

20   A    Yes.

21   Q    Okay. Would he be the best person to tell us in this  
22           trial as to whether or not that study was an  
23           epidemiology study?

24   A    If he accepts it as a valid and scientifically  
25           performed epidemiological study, then I would accept

1           that, but as far as your conclusion, I wouldn't  
2           accept that.

3       Q    I'm not asking you to accept anything that I say.

4       A    Right, right.

5       Q    But let's talk about it. In 1956 this researcher  
6           Stockinger is reporting something that Cartier has  
7           reported, right?

8       A    Right.

9       Q    And the implication is well, maybe we could have  
10          lesser -- let's start with this: In order to have  
11          asbestosis you need significant exposures to  
12          asbestos, right?

13      A    That's correct.

14      Q    And the thinking is maybe you don't need those sorts  
15          of significant exposures to asbestos to get lung  
16          cancer; is that the implication by that sentence?

17      A    That indicates there's a possibility of that and it  
18          requires more epidemiological studies to prove one  
19          way or the other. At that point it's not conclusive  
20          though, which is what Dr. Stockinger indicated.

21      Q    Okay. It's not for sure at this point, right?

22      A    That's right.

23      Q    Okay. All right. As an industrial hygienist, you  
24          want to be absolutely positive of things before you  
25          expose workers to industrial carcinogens?

1 A You want to have conclusive information in order to  
2 establish the TLV values.

3 Q And if you don't have those conclusive information  
4 but you have strong suspicions, it's okay to expose  
5 workers to carcinogens?

6 A Well, first of all, you have to have conclusive  
7 information that it is or is not a carcinogen. We  
8 found out later that it definitely was a carcinogen  
9 but that was later, you know, after the 1955 and a  
10 few studies after that, many of them with Selikoff  
11 and Chris Wagner. But you establish a TLV based on  
12 the best available scientific information, and the  
13 people who reviewed that information were  
14 governmental industrial hygienists with no ties to  
15 private industry. Their only concern was the  
16 American worker and making sure that that American  
17 worker was not overexposed to a material that was  
18 going to result in cancer or asbestosis.

19 Q Let's get back to something you just said, and that  
20 is that as of 1955, is it your testimony that  
21 asbestos has not been conclusively proven to cause  
22 cancer?

23 A In 1955, with the Richard Doll study, that's  
24 recognized as the first epidemiological study that  
25 concluded that overexposure to asbestos resulted in



1 an increased risk of lung cancer among the employees  
2 who were exposed to asbestos.

3 Q So as of 1955 we can consider asbestos a carcinogen,  
4 yes or no?

5 A It was considered at that time a carcinogen based on  
6 that study, although there was still a lot of doubt,  
7 still many people felt you had to have asbestosis to  
8 develop cancer. And, you know, those were the people  
9 who were the leaders in the world as far as their  
10 knowledge of asbestos. For example, Selikoff, for  
11 example, stated in as late as 1972 that before 1960  
12 there was uncertain and tenuous information as far as  
13 whether asbestos was a --

14 MR. COSMICH: Objection, Your Honor.

15 THE COURT: Overruled.

16 BY MR. DE BLASE:

17 Q Let's get back and start at the beginning, okay, Dr.  
18 Gregory? You have mentioned I think -- maybe you  
19 didn't. Have you published anything on asbestos?

20 A Nothing particular on asbestos, that's correct.

21 Q How about anything generally?

22 A Yes, I have, generally.

23 Q Tell us?

24 A Well, they're management of safety and health  
25 programs. I published two management articles on how

1 to use techniques to prevent overexposure to  
2 chemicals and occupational injury, so they're just  
3 basically indicating to management what management  
4 has to do to prevent occupational diseases and  
5 occupational injuries and all those techniques  
6 involving engineering and work practice, engineering  
7 controls, personal protective equipment,  
8 accountability, observations, and a bunch of other  
9 additional controls that I've put into those articles  
10 on how to make sure that employees are working safely  
11 and under safe working conditions.

12 Q And is that published in the peer-reviewed  
13 literature?

14 A Yes.

15 Q Where is that?

16 A American Safety Society, publication called  
17 Professional Safety and the American Industrial  
18 Hygiene Association Journal.

19 Q And does the word "asbestos" appear in any of those  
20 articles?

21 A No. I covered all potential health hazards as a  
22 group in those articles.

23 Q But the word "asbestos" appears nowhere in any of  
24 those articles?

25 A No, there was no reason to specify asbestos. The

1 controls for asbestos are similar to the controls for  
2 all other occupation potential health hazards.

3 Q Your Ph.D. dissertation had nothing to do with  
4 asbestos, correct?

5 A No, it did not.

6 Q Your master's thesis had nothing to do with asbestos,  
7 correct?

8 A No. They were industrial hygiene monitoring  
9 techniques, but they didn't apply specifically to  
10 asbestos because those techniques had already been  
11 developed for years and years long before I entered  
12 my master's degree program or Ph.D. program. They  
13 wouldn't have awarded me a master's thesis or a Ph.D.  
14 if I had repeated what everyone else had done before  
15 me, at least at the University of Cincinnati they  
16 wouldn't.

17 Q The air sampling you did for that dissertation had  
18 nothing to do with asbestos, did it?

19 A That's correct, but I've sampled for asbestos  
20 hundreds and hundreds of times.

21 Q Have you brought with you here today any results of  
22 air-sampling testing you've done?

23 A No. As I indicated, I've sampled for asbestos  
24 hundreds of times during my career.

25 Q We're going to talk a little bit about that today,

1 but you haven't brought the results of air-sample  
2 testing, in other words, the actual fibers per cc  
3 here in court today?

4 A No, most of that would have been government documents  
5 that OSHA owned and not me. It would have been  
6 illegal for me to have taken those from OSHA, and  
7 then the others were owned by the companies that I  
8 worked for, and I did not take copies of those as  
9 well.

10 Q And you've never measured the level of asbestos  
11 released from a Kaylo product, correct?

12 A I have measured the removal of various calcium  
13 silicate thermal insulation products. I couldn't  
14 tell you that it was Kaylo. It could have been one  
15 of the other calcium silicate thermal insulation  
16 products, because once the product is installed, and  
17 then you remove it, of course, you know, there's no  
18 Kaylo on the product so -- but with all the sampling  
19 that I've done during removal operations where  
20 employees have had to remove insulation to repair  
21 lines, valves and things like that, it's highly  
22 probable that I have sampled during a removal of  
23 Kaylo and other types of calcium silicate insulation  
24 products.

25 Q So getting back to my question. You don't know,

1           you've never actually sampled Kaylo, what you know to  
2           be Kaylo, and taken dust measurements from Kaylo, is  
3           that right?

4       A    During a removal operation you don't know whether  
5           it's Kaylo or Johns Manville or Pabco. I mean, you  
6           can identify by its texture in the smoothness and the  
7           whiteness that it is a calcium silicate material.

8       Q    They all look about the same?

9       A    The calcium silicates do, yes.

10      Q    And you're talking about tear out or removal of this  
11           pipe covering, right?

12      A    Yes.

13      Q    That's your experience with testing?

14      A    That's correct, because by the time I got into the  
15           field --

16      Q    And specifically --

17                   THE COURT: Don't interrupt the answer.

18                   THE WITNESS: By the time I got into this  
19           profession they were not installing Kaylo or any  
20           other type of calcium silicate. Manufacturers  
21           stopped manufacturing those products in 1973, and I  
22           started in 1974.

23      BY MR. DE BLASE:

24      Q    Right. So you've never had an opportunity to test  
25           anything that was actually installed, right?

1 A Just during a removal.

2 Q My question is, you never had an opportunity to test  
3 anything that was actually installed, right?

4 A As far as Kaylo or any other thermal insulation  
5 products, that's correct.

6 Q Thank you.

7 A I did test other asbestos-containing products that  
8 were installed or used but not thermal insulation  
9 because, again, it was not being manufactured at that  
10 time.

11 Q Now, you have done in the past, in past cases, this  
12 thing called a cumulative dose reconstruction, is  
13 that what you call it?

14 A That's correct.

15 Q Now, some scientists, or perhaps many scientists,  
16 think that that's not a valid contribution to  
17 science. Are you familiar with that controversy?

18 A Yes. It's an estimate in most cases, because  
19 typically you don't have enough detailed information  
20 on frequency and duration and working environmental  
21 conditions to be very accurate. At best you come up  
22 with an estimation.

23 Q So you'll read a person's deposition who has  
24 mesothelioma, take down what they have to say about  
25 their exposure and come to conclusions as to what

1           their cumulative dose to asbestos was in their  
2           lifetime, that's what you've done in the past?

3       A   Not for their lifetime, just during a particular job  
4           where they give me enough information on frequency  
5           and duration, that I can make those types of  
6           calculations and estimations, you know. As far as  
7           lifetime, you're talking about ever since they were a  
8           child and exposed to the ambient concentration of  
9           asbestos and summer jobs and things like that.  
10          Usually -- in fact, I can't think of any case where  
11          I've ever had that kind of detailed information,  
12          where I could come up with quantitative results on a  
13          person's total lifetime exposure that I could say is  
14          scientifically reliable or at least has scientific  
15          certainty.

16       Q   Background exposures or ambient exposures to  
17           asbestos, would you agree that those do not increase  
18           one's risk of getting mesothelioma?

19       A   Well, it depends. If someone lives in an environment  
20           where those levels are relatively high, it certainly  
21           increases their overall cumulative dose of exposure.

22       Q   Let's talk -- well, you're talking about if somebody  
23           lives near an asbestos mine, right?

24       A   No. I mean, it could be in an urban area where there  
25           was a lot of mobile traffic with the braking of cars

1 and use of clutches where you get some asbestos from  
2 brake materials, clutch materials, or they could be  
3 in a school room where there's a deteriorated  
4 fireproofing material or soundproofing material where  
5 asbestos fibers are being released into the air, or  
6 the ventilation system was sprayed with a  
7 fireproofing or soundproofing material and that's  
8 deteriorated with time and those fibers are being  
9 blown out into the classroom, or in their home.

10 I mean, asbestos was a material that was  
11 used for everything from coats to diapers, to  
12 tissues, to dish towels, to mattresses, and there's  
13 just -- asbestos was everywhere in those days. And  
14 there was all types of potential exposures in the  
15 house as well as outside the house and in the ambient  
16 environment, in your school rooms and other places.

17 Q Dr. Gregory, I'm talking about ambient exposures to  
18 asbestos. You're familiar with that term, ambient,  
19 right?

20 A Yes, ambient means around us.

21 Q Okay. Well, when used and discussed in scientific  
22 literature when it relates to asbestos, it doesn't  
23 mean somebody who's sitting next to their couch that  
24 might have asbestos in it, it doesn't mean somebody  
25 who's in a classroom breathing in asbestos from a



1 ceiling, right, it doesn't mean that, does it?

2 A Ambient means outside or inside. It means the  
3 environment that surrounds you. Typically when they  
4 talk about ambient levels they're talking about  
5 ambient environmental levels outside of a building,  
6 in other words, out in the open spaces.

7 Q Away from a point source of asbestos, right,  
8 something we can identify as being asbestos as being  
9 given off by that?

10 A Well, you can't usually say point source because some  
11 rock formations contain naturally occurring asbestos.  
12 When the wind blows or when there's some construction  
13 activity, those fibers can be released into the air.  
14 So ambient environmental just means what's in the  
15 outdoor environment at that particular point in time.

16 Q So would you agree with me that it has nothing to do  
17 with a point source of asbestos; in other words, we  
18 can talk urban areas, and there have been studies on  
19 urban background levels of asbestos, right?

20 A Yes.

21 Q Okay. And those background levels of asbestos have  
22 been quantified, have they not?

23 A In certain areas but in very few.

24 Q Yeah, okay. And that's what I'm talking about when I  
25 talk about ambient. Is that what you're talking

1 about, you're including these other things like  
2 inside a school?

3 A No. If you want to say ambient outdoors, then we can  
4 agree that that's outside of any building or any  
5 structure.

6 Q Okay. But I mean, it could include somebody who  
7 lives next to an asbestos mine and then we're not  
8 talking about ambient then, are we?

9 A Yes, you are, because you're outdoors and that  
10 asbestos mine or asbestos manufacturing plant is  
11 releasing asbestos fibers into the outdoors. They  
12 have to come from somewhere.

13 Q Understood. They certainly didn't happen naturally.

14 A No, they can happen naturally from the ground.

15 Q They can. And so that happens when it happens from a  
16 natural outcropping in the ground, right?

17 A Correct.

18 Q And it can also happen if somebody's in a  
19 neighborhood, say, in London there have been papers  
20 about this, a London neighborhood, people getting  
21 mesothelioma from just living in their own home but  
22 there's a factory nearby, right?

23 A Or a high-traffic area, sure.

24 Q High-traffic area, what are you talking about?

25 A Where you use brakes that contain asbestos.

1 Q Let's talk about that, the brakes. Tell me about  
2 this brake study that you know of where there has  
3 been a documented increased risk of mesothelioma from  
4 living near an area where there's a lot of brakes?

5 A Well, there's nothing that specific showing an  
6 increased risk. It just shows an increased exposure  
7 to anyone that happens to live or work or pass  
8 through that area, but I'm not aware of any  
9 scientific publications that have had the information  
10 to determine that that particular type of exposure  
11 resulted in an increased risk of mesothelioma to any  
12 particular population. But it certainly increases  
13 the inhalation or the cumulative dose that anyone  
14 that might be exposed would have.

15 Q Okay. All right. So that doesn't increase risk.  
16 Does ambient, just being a naturally occurring rock  
17 deposit -- in other words, there's no point sources  
18 anywhere around you, the levels are very, very low in  
19 very rural areas as opposed to being in urban areas,  
20 and they have decreased with time as we get away from  
21 using asbestos in the 1970s. So getting back to my  
22 question. In those areas, just the background that  
23 happens to be in those areas, the background on  
24 asbestos, is that something that increases one's risk  
25 of mesothelioma?

1 A I think you're asking me a medical question.

2 Q I'm not actually; I'm asking you about risk.

3 Industrial hygienists talk about risk, do they not?

4 I'm not talking about causation; I'm talking about  
5 risk.

6 A Well, we like to avoid getting into medical issues to  
7 determine the cause of mesothelioma and increase the  
8 risk of mesothelioma, but there's certainly very low  
9 levels that you would find in an urban area today as  
10 far as ambient environmental concentration of  
11 asbestos.

12 Q Okay. So getting back to my question. Does ambient,  
13 away from a factory, away from a mine, does that  
14 increase one's risk of mesothelioma?

15 A If you're in an area where you have very, very low  
16 exposures to asbestos due to -- in the absence of any  
17 of those things you're talking about, and you live in  
18 that area for your whole life, then it does not  
19 increase your risk, in my opinion, as an industrial  
20 hygienist, which like I'm indicating to you you're  
21 getting into some medical-type questions.

22 Q I don't want to get into the medicals. I want to  
23 stick where your specialty is.

24 A In my opinion, in an area where the concentrations  
25 are very, very low, it does not increase your risk or

1 at least put you in a category of people that have an  
2 increased risk of developing mesothelioma.

3 Q Now, you said something that caused me a little  
4 concern. I want to go over it, this high-traffic  
5 area. What is the high-traffic area, and is that  
6 something that increases one's risk of getting  
7 mesothelioma?

8 A Well, back in the years before the 1980s when brakes  
9 contained asbestos, in a high urban area near stop  
10 lights, stop signs and things like that in the city  
11 where you had the constant application and releasing  
12 of brakes, there have been significant levels of  
13 asbestos measured in those areas. Now, fortunately,  
14 most of the people braking and going through there or  
15 walking through there aren't staying there, so  
16 they're not breathing all that in; they're moving  
17 away from that, but there have been those studies  
18 that have shown significant levels of asbestos in  
19 those particular areas.

20 Q And what kind of levels are we talking about on a  
21 fiber per cc basis?

22 A Oh, it varies from less than .1 up to above one fiber  
23 per cc.

24 Q And what studies do you refer to for that?

25 A Well, the ones I'm thinking about now are the

1 California studies.

2 Q The Baxter studies?

3 A I don't remember the name of them. There's been a  
4 lot of studies done around the country.

5 Q I've never heard of anything above -- or background  
6 for ambient -- above .01 fibers per cc, and you have?

7 A Well, maybe you've read more industrial hygiene  
8 articles and maybe you've been to more presentations  
9 that I have.

10 Q So tell us, what do you have?

11 A I can't remember the exact publication and whether it  
12 was a publication or just a study that was presented  
13 at the American Industrial Hygiene Conference.

14 Q The highest I've heard is .01 by a fellow named  
15 Baxter in California, which is significant, is it  
16 not?

17 A It's significant for an ambient concentration,  
18 ambient environmental concentration.

19 Q Would you consider .01 fibers per cc to be something  
20 increasing one's risk of getting mesothelioma?

21 A Well, again, you're getting into a medical question.

22 Q I'm just talking about risk.

23 A If you have 24 hours of exposure to that you're  
24 exposed at three times what an employee in a  
25 workplace would be exposed to, so it would depend on,

1           you know, how long your exposure to that was and how  
2           much of that you were actually absorbing into your  
3           lungs, and if it was being retained by your lungs,  
4           and what particular type of asbestos it was.

5       Q   Moving away from that, is it your understanding that  
6           ambient, other than that Baxter study I talked about,  
7           is more along the lines of .00005 fibers per cc?

8       A   The latest that I've seen was published in 1984 and  
9           it was .0004 fibers per --

10      Q   Is that from the ATSDR, is that where you got that  
11          figure from?

12      A   Yes.

13      Q   And that's a pretty authoritative publication. Tell  
14          us what the ATSDR is?

15      A   Well, it's a publication that involves studying  
16          various hazardous materials and ambient  
17          concentrations of various hazardous materials in the  
18          asbestos toxicology profile, is what they're referred  
19          to, and they periodically publish their results at  
20          various meetings on that, but that was a 1984 study.  
21          There's been other studies, even Selikoff did air  
22          monitoring in cities -- of course, that was back in  
23          the '60s -- and found much higher levels than that  
24          which you would expect because asbestos was being  
25          used in large volumes throughout the country during

1 that time period.

2 Q And when you say much higher, .0000, no -- four now?

3 A Yes.

4 Q .0004 is from the ATSDR?

5 A Right.

6 Q And when you say it was probably significantly higher  
7 in Seilkoff's era in the '60s, you're saying well,  
8 let's take a zero off or something like that?

9 A No, no. See, he reported his in different units, and  
10 so it's difficult to convert his into fiber per cc,  
11 which you have from that document as fibers per cc.  
12 But as I recall, there have been studies where they  
13 -- many have reported near some areas in the '70s of  
14 .02 fibers per cc converted from some of his studies  
15 as well as other studies. But it varies, it varies  
16 all over the place, and it depends on whether you're  
17 near a factory, near a high-urban area where there's  
18 a lot of brake work, the wind directions. It just  
19 depends on so many factors.

20 Q In this case, in Mr. Humphreys' case, is there any  
21 indication that ambient played a role in his  
22 mesothelioma?

23 A Well, I don't know what the exposure levels were in  
24 the ambient environment that he worked in outside of  
25 the power plant where he was a construction worker.



1 I know there was a lot of concerns involving northern  
2 Minnesota during the dumping of --

3 MR. DE BLASE: Object, Your Honor. This is  
4 -- and the subject of a motion in limine. I mean,  
5 it's outside the scope.

6 THE COURT: Just object nonresponsive.

7 MR. DE BLASE: Nonresponsive.

8 THE COURT: Sustained.

9 BY MR. DE BLASE:

10 Q All right, by the way -- well, let's get back to  
11 this. Okay, so in your opinion, ambient did not play  
12 a role in Mr. Humphreys' mesothelioma?

13 A I don't have enough information to say that.

14 Q Okay. The information that you do have is what you  
15 testified to on direct, is that right?

16 A Yes.

17 Q He had a substantial exposure to pipe covering,  
18 right?

19 A Based on his testimony, he did have exposures to the  
20 use of pipe covering and the use of  
21 asbestos-containing insulating cements as well as --

22 MR. DE BLASE: Your Honor, I move to  
23 strike. I'm asking a question.

24 THE COURT: It's nonresponsive. Sustained.

25 BY MR. DE BLASE:

1 Q All right. So the next thing he had exposure to was  
2 the mud, he had a substantial exposure to  
3 asbestos-containing mud, correct?

4 A Based on his testimony, that's correct.

5 Q He also had other exposures in his life, right?

6 A Yes, he did.

7 Q And we'll talk about those. Now, your background is,  
8 you started with OSHA in 1974, you worked there for  
9 seven years, is that right?

10 A That's correct.

11 Q And after that seven years you worked for companies,  
12 right?

13 A That's correct.

14 Q So when you were talking about you were the enforcer,  
15 the cop, that's when you were with OSHA?

16 A That's correct.

17 Q When you were with the companies though you were  
18 being paid by the companies, right?

19 A That's correct.

20 Q And you were part of somebody who was in the  
21 management of those corporations, right?

22 A Well, not really management. I, you know, was a  
23 staff person who made recommendations to management,  
24 I guess is a better way of putting that.

25 Q And then after your work with companies, that ceased

1           when?

2       A     In 2012.

3       Q     All right. 2012. And then -- well, before 2012 you  
4           were doing some of this asbestos litigation  
5           consulting work, right?

6       A     Yes, on a part-time basis, on evenings, weekends, and  
7           then I negotiated vacation time with my employers to  
8           work on it.

9       Q     And when did that start?

10      A     That happened beginning of 1996.

11      Q     That's when you began testifying for companies,  
12           right?

13      A     Yes, very little at that time.

14      Q     And then since 2012, this testifying for defendants  
15           has been your exclusive occupation?

16      A     Well, I do other industrial hygiene type of work as  
17           well, but most of it is litigation-related work.

18      Q     All right. And you've always worked on behalf of  
19           defendants in asbestos cases, right?

20      A     In asbestos cases, all but one.

21      Q     And some of the companies that you have done work for  
22           include Owens-Illinois, obviously, right?

23      A     Yes.

24      Q     And you've worked for them on numerous occasions,  
25           right?

1 A Yes.

2 Q But you've also worked for other companies as well in  
3 this asbestos litigation, right?

4 A That's correct.

5 Q And some of those other companies are Garlock?

6 A Pardon?

7 Q Garlock?

8 A Yes.

9 Q Armco?

10 A Yes.

11 Q Motion Industries?

12 A Yes.

13 Q Ajax?

14 A Yes.

15 Q Goodrich and Goodyear?

16 A Yes.

17 Q Peters Supply Company?

18 A Yes.

19 Q Buffalo Pumps?

20 A Yes.

21 Q Gould Pumps?

22 A Yes.

23 Q Anybody else?

24 A American Standard.

25 Q Okay. Ingersoll Rand Pumps, Bechtel Corporation?

1 What did Bechtel make?

2 A Bechtel was a general contractor involved in building  
3 the plant that I got involved with.

4 Q Anybody else?

5 A Yeah, there were others, but there have been just one  
6 or two cases involving -- Insull Company manufactured  
7 risers for ingot molds in the steel industry.

8 Q And in each of these cases, it involved a person who  
9 has an asbestos-related disease, right?

10 A Yes.

11 Q And in each of those cases, your conclusion was that  
12 person did not have enough exposure to that  
13 particular defendant's product to have constituted a  
14 significant risk, right?

15 A No, that was not my conclusion at all of those cases.

16 Q You concluded in some of those cases that the  
17 defendant's product did in fact contribute to the  
18 disease?

19 A In some of those cases I was asked to look at all the  
20 different products that were used and determine which  
21 ones resulted in significant exposures to asbestos,  
22 not necessarily the company that I was representing  
23 or that the attorneys represented that hired me, but,  
24 in other words, to determine whether or not there  
25 were other exposures that that employee may have had

1 at that work site.

2 Q The Eaton defendant that you worked for, that was  
3 work for a company where you were testifying, and  
4 that company was actually an employer of somebody who  
5 got sick from being exposed to asbestos, right?

6 A Which company are you talking about?

7 Q Eaton.

8 A Oh, Eaton Corporation. Yes, I was representing Eaton  
9 Corporation at that point. I was hired by attorneys  
10 who were representing Eaton Corporation.

11 Q And the attorneys were paid by the company that needs  
12 the testimony, right?

13 A Right.

14 Q And Eaton was an employer of somebody who got sick,  
15 right?

16 A Eaton bought a company, Cutler-Hammer, if that's the  
17 case you're talking about. Cutler-Hammer was a  
18 manufacturer of electrical switches and components,  
19 and Eaton bought Cuttler-Hammer, but it was  
20 Cuttler-Hammer that produced the products that the  
21 employees used and manufactured, and that resulted in  
22 asbestos exposures.

23 Q Now, you talked about the hierarchy of controls a  
24 little bit on direct today. That hierarchy of  
25 controls, you don't consider substitution of the

1           offending material to be in the hierarchy of  
2           controls; you consider that to be a separate category  
3           all together?

4       A   Well, if you substitute it you don't need to control  
5           it; in other words, if you substitute a less  
6           hazardous material for a more hazardous material,  
7           then you don't have to control it so it eliminates  
8           the need for control. But many include substitution  
9           as a -- as one of the hierarchies of control, but in  
10          my opinion, if you don't have it, you're using  
11          something else, then it's not a control; it's a  
12          prevention.

13       Q   What materials did Owens-Illinois provide you in this  
14          case?

15       A   Well, the depositions that I reviewed, or that I  
16          listed yesterday, including the specifications for  
17          the combustion engineering boilers that were  
18          installed at the power plants. That was the extent  
19          of it that I listed yesterday.

20       Q   Well, you didn't list the depositions, and I didn't  
21          hear the name. Did you review the deposition of  
22          Lloyd Stavich?

23       A   Yes, I did.

24       Q   So you heard his testimony and his use of the Kaylo  
25          product at the plant, right?

1 A Yes, I did.

2 Q Other than those materials, you've done no other  
3 independent research in this case, have you?

4 A That's correct.

5 Q Okay. And have you ever asked Owens-Illinois for a  
6 piece of their Kaylo? I know it's made many years  
7 ago, 1958 they stopped making it?

8 A Yeah.

9 Q Have you ever asked them hey, do you guys have any of  
10 those Kaylo around and can I test it?

11 A I wouldn't want to do that.

12 Q You wouldn't want to do that?

13 A No, I wouldn't want to do that.

14 Q Why not?

15 A Well, number one, you know, it would be 60 years old  
16 -- or 50 years old, I guess, if they had at that  
17 point, 50 -- well, it's 56 years old, and it's  
18 probably going to be fairly dried out, more brittle  
19 than it would have been when it was installed prior  
20 to 1958, and I can't think of any reason why I would  
21 want to test it.

22 Q Okay. Just clearing up the last topic on  
23 substitution. Is substitution, in your mind, from an  
24 industrial-hygiene perspective, one of the most  
25 important ways to prevent hazards in the workplace?



1 A Yes. If you're not using a potentially hazardous  
2 product, then you've eliminated the need for any kind  
3 of controls, assuming that that is a safer product  
4 than the product that it's being substituted for.

5 Q And what -- and that was known in the '30s, '40s and  
6 '50s, right, this concept of substitution?

7 A Well, substitution has always been known. I mean,  
8 you select the products that your employees are going  
9 to be working with, and, you know, if there's a  
10 suitable substituted material that you can use, then  
11 yes, substitution's always, as far as I know, been a,  
12 something that an employer had available to them.  
13 But I don't know if it applied to thermal insulation  
14 at that time period because that was what everyone  
15 was using. To my knowledge, there was no available  
16 suitable substitutes for the type of insulation work  
17 that they were doing during that time period.

18 Q You're not an expert on substitution of materials  
19 within products, are you?

20 A Well, based on what I've read about what was being  
21 used during that time period and the other products  
22 that were tried during that time period for thermal  
23 insulation, the general consensus was that there were  
24 no suitable substitutes for asbestos and thermal  
25 insulation until the '60s.

1 Q Thank you.

2 MR. DE BLASE: May I approach, Your Honor?

3 THE COURT: You may.

4 BY MR. DE BLASE:

5 Q I'm going to hand you some deposition testimony that  
6 you've given in the past.

7 THE COURT: Thank you.

8 BY MR. DE BLASE:

9 Q You were asked a question before under oath, do you  
10 remember?

11 A I'll have to look at it.

12 Q If you're an expert on substitution with respect to  
13 asbestos-containing products?

14 A Yeah.

15 Q Do you remember being asked that question?

16 A I don't remember exactly, no. I've been asked a lot  
17 of questions.

18 Q Do you remember saying no, I'm not an expert on  
19 substitution of asbestos-containing products?

20 A I'm not an expert on thermal insulation products and  
21 how to manufacture those and which ones you need for  
22 any particular type of application, especially in a  
23 power plant where the temperatures are usually very  
24 high that they're trying to insulate piping with.

25 Q So the answer is you're not an expert with respect to

1 substitution in asbestos-containing products, or you  
2 are?

3 A Well, I have knowledge on what was available during  
4 that time period based on the depositions that I've  
5 read and the publications that I've reviewed, but I'm  
6 not an expert on, you know, what was being tested  
7 during that time period and then where it was being  
8 used and what all the results were.

9 All I have is what the literature indicated  
10 to me, and that was that there were no suitable  
11 substitutes found for asbestos until the 1960s as far  
12 as for their use in thermal insulation products.

13 Q All right. Well, we've heard a lot of testimony in  
14 this trial; in fact, defendant brought an expert to  
15 talk about that in this case. Did you talk to him at  
16 all?

17 A No. Which --

18 Q Dr. German.

19 A No, I didn't talk to Dr. German.

20 Q Were you ever asked to go back and form an opinion in  
21 this case about materials, substitute materials,  
22 other than asbestos?

23 A I don't think I --

24 Q In this case.

25 A I wasn't asked in this case, no.

1 Q Have you ever been asked to do that?

2 A I don't believe I have, no.

3 Q Did the lawyers give you an agenda of things to do in  
4 this case, what they were looking for?

5 A They indicated that they wanted me to review the  
6 depositions and the job specifications that they sent  
7 and asked me if I would give my opinion as to, first  
8 of all, whether I could calculate or estimate a dose  
9 of exposure that Mr. Humphreys may have received to  
10 Kaylo as well as to the Mundet insulating cement that  
11 he used.

12 Q You've been able to provide us with metrics  
13 concerning exposure levels that you received to those  
14 products, right?

15 A That he specifically received?

16 Q Yeah, assuming of course that he was exposed to Kaylo  
17 and exposed to the mud as testified, you've given us  
18 metrics as to the amount of fibers per cc from those  
19 operations, right? Did I hear that right from your  
20 testimony?

21 A No. I gave you the general exposure levels that have  
22 been reported in the literature for insulators during  
23 the pre-1965 period and the post-1965 period, but I  
24 didn't specifically mean to imply that those were his  
25 particular exposure levels to OI Kaylo, if that's

1 what you're asking.

2 Q And why is that?

3 A Because I didn't have enough information in his  
4 deposition as far as the job activities that he  
5 performed, the number of times that he performed  
6 them, and the distance that he was from others who  
7 performed similar operations, not only from the  
8 insulators that he was providing the product to,  
9 mixing the cement for, as well as the distance that  
10 he was and how often he was near other contractors  
11 that were insulating other types of equipment rather  
12 than just piping.

13 Q You didn't see that testimony in his deposition, in  
14 his trial testimony here? You didn't see testimony  
15 concerning his cutting of the product, his working  
16 around the product, his working with people?

17 A I saw --

18 Q Let me finish the question. His working with people  
19 that were working with the product, the fact that he  
20 was cutting the product in about a foot and a half  
21 away while he was cutting it, the fact that he was  
22 sweeping up the dust from the product, the fact that  
23 he saw that there was dust, the fact that this  
24 process -- this summer was about three or so months,  
25 the fact that he did this eight hours a day as a

1 full-time job during that time period, the fact that  
2 he worked around other insulators who were doing the  
3 same thing, all of that information was not enough  
4 for you to give a range of exposures to this product?

5 A No, because it was not specific as far as frequency  
6 and duration as well as distances.

7 Q Okay. And you've done this sort of thing in other  
8 cases, though, have you not?

9 A I have, where there's been more explicit and more  
10 consistent information.

11 Q What was inconsistent about Mr. Humphreys' testimony?

12 A Well, for example, he indicated at one point that he  
13 mixed the insulating cement or mud, as they called  
14 it, anywhere from two to three times an hour, but  
15 later he said three to five times a day. And then  
16 also in his testimony he said for half a day, so, you  
17 know, it was hard to pick how often he actually did  
18 the mixing. He was explicit on the duration of  
19 mixing. He said it took him about ten to 15 minutes,  
20 but as far as how frequent, in other words, how  
21 often, I didn't have that information.

22 And I really didn't have specific  
23 information on exactly how long he worked, other than  
24 he said he thought he started in late June, possibly  
25 early July, and he worked possibly three weeks into

1 September before he went back to college.

2 Q You couldn't give us ranges just based on those  
3 parameters alone, a low and a high, you couldn't do  
4 that?

5 A No.

6 Q But you have done that in other cases, haven't you?

7 A Where it has been explicit; in other words, I mixed  
8 the insulating cement two times per hour, took me  
9 15 minutes to do that mixing, and I did that five  
10 days a week for 12 weeks, and I did this mixing in  
11 this type of environment, or I worked within 20 feet  
12 of other insulators that were using similar, not  
13 similar products, but they were using insulating  
14 products and insulating cement while insulating  
15 piping. So I have been able to do that but not in  
16 this particular case. It just wasn't consistent  
17 enough or explicit enough for me to do that.

18 Q If you took the low end of everything that you just  
19 talked about with respect to Mr. Humphreys'  
20 testimony, would that be in your mind a substantial  
21 exposure to asbestos, just based on his work at the  
22 taconite power plant, all of the different things  
23 that he did there?

24 A Well, I don't know what you're defining as  
25 "substantial."

1 Q You've read his deposition, right?

2 A Yes.

3 Q And you have an understanding of all of the avenues  
4 and opportunities that he had to be exposed to  
5 asbestos, right?

6 A Yes.

7 Q And of all of the universe of opportunities for him  
8 to be exposed to asbestos, his work at the taconite  
9 power plant was the biggest exposure to asbestos he  
10 had in his life, right?

11 A Based on his deposition and the duration of time that  
12 he was there, it was certainly a significant source  
13 of exposure.

14 Q All right.

15 Now, I heard in your direct testimony  
16 criticisms of Mr. Templin, and I was scratching my  
17 head because I was trying to figure out what was  
18 going on there. His MAS studies you criticized,  
19 right, not his but MAS's studies?

20 A I don't think I criticized him. If I did, I  
21 apologize to the court, but I criticized the studies.  
22 As far as I know, he wasn't involved in those studies  
23 and so I certainly wouldn't criticize him.

24 Q Okay, so the studies are actually less than the  
25 numbers that you were giving us for these operations



1           , aren't they?

2       A    Yes, based on his testimony.

3       Q    Okay. So are you saying that the studies are trying  
4           to overstate the exposures, is that what you were  
5           trying to say yesterday?

6       A    All I indicated is that when you do simulation  
7           studies in a confined space with limited ventilation  
8           you're not representing the workplace and what the  
9           worker was exposed to. And also, when you use people  
10          who have never cut pipe, never handled pipe, or mixed  
11          cement, you know, those are skilled people with  
12          specialized techniques. Only sampling those people  
13          in a real field-type situation in the workplace is  
14          going to represent their exposure and not a study  
15          done in a confined space by a -- nonskilled people.

16      Q    Understood. And I think that's what he testified to,  
17          that these are not trying to replicate work practices  
18          in the field but we're trying to understand if we  
19          have exposures to asbestos, and at least insofar as  
20          that's concerned, these tests give us some  
21          information on that, don't they?

22      A    Yes, they show that asbestos can be released when  
23          that product is handled in the way that they handled  
24          it in their simulation chamber, yes.

25      Q    And the -- but you would prefer to see information

1 from the literature on actual -- where do you get  
2 your numbers? You were talking about, I think you  
3 said ten to 15 fibers per cc with the Kaylo, right?

4 A Not with the Kaylo.

5 Q With thermal insulation?

6 A With asbestos-containing thermal insulation product  
7 among insulators that were installing those types of  
8 products pre-1965.

9 Q Which is what we're talking about in this case,  
10 right?

11 A Right, um-hum.

12 Q We're not talking about post-1965?

13 A Right.

14 Q So pre-1965, you're saying the literature supports  
15 ten to 15 fibers per cc while working with thermal  
16 insulation?

17 A That's correct.

18 Q And what is the basis of that, what paper are you  
19 referring to?

20 A Most of that is from the Fleischer and Drinker  
21 studies of 1946.

22 Q Anything else?

23 A There was also a Ferris study.

24 Q Anything else?

25 A No.

1 THE COURT: How do you spell Ferris?

2 THE WITNESS: F-E-R-R-I-S, I'm sorry.

3 BY MR. DE BLASE:

4 Q How about Hodgson and Darnton, have you read that  
5 article? H-O-D-G-S-O-N, and Darnton, D-A-R-N-T-O-N.

6 A I've heard about that. I haven't reviewed that  
7 recently, though.

8 Q This is something that Mr. Templin talked about in  
9 his direct testimony. This is a paper that was --  
10 may I publish it, Your Honor?

11 THE COURT: Any objection?

12 MR. COSMICH: I don't think he has a  
13 foundation for it yet. He hasn't read it.

14 MR. DE BLASE: Well, he doesn't need to  
15 read it. This is a publication that Mr. Templin has  
16 talked about and found to be authoritative and  
17 reliable.

18 MR. COSMICH: I don't know that that was  
19 established.

20 MR. DE BLASE: Yes, it was.

21 THE COURT: The objection is overruled.

22 BY MR. DE BLASE:

23 Q All right. We're not going to do this too much. But  
24 let's talk about it a little bit. Hodgson Darnton.  
25 You know who these researchers are?

1 A I've heard of them, yes.

2 Q They're folks that talk about asbestos and exposure.  
3 We're not going to talk about this whole article  
4 because it's pretty thick, but they actually talked  
5 about the insulator cohort that Dr. Selikoff studied.  
6 You know what that's all about, right?

7 A Oh, yes.

8 Q And that was a large cohort, I think what, 14,000 --

9 A Yes, thousands.

10 Q And that cohort which started in the 1960s and is  
11 even being studied to this day, is being referred to  
12 in this paper. These researchers found insulators --  
13 see that cohort number eight there?

14 A Yes.

15 Q That's the U.S.-Canada insulators?

16 A Yes.

17 Q And they have provided average cumulative exposure at  
18 the top there, you see that, that column, average  
19 cumulative exposure, fibers per milliliter year,  
20 that's fiber per cc year?

21 A Right, um-hum.

22 Q And so that's basically a -- we multiply the numbers  
23 of years now to our fiber per cc metric, right?

24 A Right, um-hum.

25 Q So for this, in this cohort, that's a big number,

1 right, 500 fiber per cc years?

2 A Right.

3 Q If we look elsewhere in the paper we see that the  
4 number of years that they're talking about is  
5 25 years?

6 A Okay.

7 Q So from that the conclusion was -- and Mr. Templin  
8 testified to this -- was that on average an insulator  
9 is really going to be in the neighborhood of 20  
10 fibers per cc, because if we divide 500 by 25 years  
11 we get 20 fibers per cc.

12 Is that within the range of what we're  
13 talking about here, ten, 15, 20 fiber per cc years?

14 A Well, I don't know when that study was done. It's a  
15 Canadian insulators. I mean, I don't know what years  
16 they're looking at.

17 Q But they're looking at the cohort. This study was  
18 done in 2000, published in 2000. So anyway, does  
19 that make a difference when? I mean, are we talking  
20 about numbers that, you know -- and it varies, we're  
21 not going to get exact science on this because we  
22 don't know because nobody was there with the  
23 breathing apparatus?

24 A Right.

25 Q We're talking about numbers that are ten, 15, 20

1 fibers per cc for this operation, right?

2 A Well, that article was. I don't know how that would  
3 pertain to those numbers that I gave you. Again, it  
4 said Canadian insulators on the -- I'm not familiar  
5 with their study.

6 Q Do Canadian insulators do insulating different than  
7 the Americans?

8 A Well, they could have; I don't know.

9 Q They do things differently, correct?

10 A Well, they could have used different products, sure.

11 Q All right. So --

12 A And had less controls. I don't really know.

13 Q When we're talking about exposures and the numbers of  
14 fibers per cc an individual might be exposed to, it's  
15 variable, right?

16 A Yes.

17 Q And a number like 20 fibers per cc doesn't surprise  
18 you, does it, for this operation, thermal insulation,  
19 the cutting, the cleanup, the sawing, the carrying,  
20 those sorts of things?

21 A Well, it would be an extreme peak in, based on what  
22 I've read, as far as American literature and the  
23 research. I don't believe the range would get up  
24 that high. There certainly could be peaks; for  
25 example, mixing insulation can go up as high as a

1           hundred fibers per cc. I said mixing insulation. I  
2           meant mixing insulating cement, so it varies.

3                   Using a band saw can raise the levels, but  
4           typically the ten to 15 I think is a better range for  
5           at least American insulators during that time period.

6   Q    Okay. All right. So what about these other  
7           operations, the brake work that he did, how many  
8           brake jobs did he do?

9   A    Well, that varied, too. He first said he did two a  
10          year for about seven years. Then he said he did more  
11          like ten, and then he said at the end, that maybe he  
12          just did six, so it varied.

13   Q    Okay. Well, if we took the top number, two a year  
14          for seven years, that's 14 brake jobs?

15   A    Fourteen, right.

16   Q    And then we have a low number of six. Is anything in  
17          that range, in your opinion as an industrial  
18          hygienist, does that increase one's risk of getting  
19          mesothelioma?

20   A    Well, again you're asking a medical question, but you  
21          certainly can, depending upon the environment that  
22          you're doing the brakes in, and he indicated that  
23          with new brakes he would sand them, which brake shoes  
24          in that time period contained a lot of asbestos, so  
25          when you're sanding your shoes you're getting some

1           pretty high exposure levels. So depending upon the  
2           number that he did, the way he did them, the  
3           environment that he was in, he would certainly have  
4           significant asbestos exposures while doing brake  
5           work.

6       Q    So it's your opinion that brake work gives somebody a  
7           significant exposure to asbestos?

8       A    Yes, I think doing brake work with  
9           asbestos-containing brake materials, especially  
10          scuffing the new brakes, will give you a significant  
11          exposure to asbestos.

12      Q    Is it something that increases one's risk of getting  
13          the disease?

14      A    If you do it enough and you get a high enough dose,  
15          in my opinion -- again, you're asking me to come up  
16          with a medical opinion -- but in my opinion, it  
17          increases or puts you in a category of people that  
18          have an increased risk of developing mesothelioma.

19      Q    Well, what about in Mr. Humphreys' case where we have  
20          a maximum of 14 brake jobs?

21      A    Well, if he -- again, I don't know exactly what his  
22          exposure level was while he was scuffing those  
23          brakes.

24      Q    Let's presume it was the worst?

25      A    He would have a significant exposure while sanding



1           those brake shoes, there's no question about it.

2       Q    What kind of metrics can we put on that, what kind of  
3           fiber per cc metrics?

4       A    We can't because no sampling was done. We don't know  
5           how close he was to the brakes. We don't know if he  
6           was downwind, upwind. We just don't have enough  
7           information to know what his exposure level would  
8           have been.

9       Q    Well, he testified that he did the brakes indoors so  
10          there wasn't any wind. So let's take that out of the  
11          equation, and let's take the worst-case scenario,  
12          what kind of fiber per cc exposure did Mr. Humphreys  
13          have to brakes?

14      A    I would not have enough information to estimate that.  
15          It would vary and it would depend, again, on him  
16          sanding the brakes and the environment that he was  
17          sanding and how close his mouth was to that  
18          particular activity, so I wouldn't be able to put a  
19          number on that.

20      Q    Well, let's presume -- let's do a hypothetical.  
21          Let's presume that his face was a foot away from the  
22          brakes while he was sanding, and he sanded every  
23          single one that he did, and in terms of brake work it  
24          was the worst possible exposure he could get. What  
25          kind of exposure -- what kind of fiber per cc can you

1 give us for Mr. Humphreys' work on brakes?

2 A I can't give you an exact number other than to say it  
3 was a significant exposure to asbestos.

4 Q Why can't you give us a number?

5 A Because I didn't sample that operation, and I don't  
6 know the conditions that he performed those  
7 activities in.

8 Q Did you sample this operation?

9 A No, I didn't sample any of those operations.

10 Q You gave us numbers there?

11 A Right.

12 Q You know what the literature is with respect to  
13 brakes and sanding and brushing out the brake dust as  
14 he testified, putting in the new brakes. Give us  
15 some numbers so we can compare it to his experience  
16 at Taconite Harbor?

17 A The exposure with brakes can be high; it can peak  
18 when you're sanding the brakes, but, again, the exact  
19 amount of exposure is something you have to determine  
20 by actually doing sampling.

21 Q Is that something that you have ever done?

22 A Yes, I've sampled the removal and installation of  
23 brake shoes.

24 Q So what kind of fiber per cc numbers did you get when  
25 you did that sort of testing?

1 A Well, I was doing it with controls. We had our  
2 employees wearing respirators and wetting down the  
3 new brakes as well as the old brakes before they took  
4 them off, plus we had local exhaust ventilation, so  
5 my levels, my concentrations of exposure that I  
6 determined were very low.

7 Q My question is, do you have any data for us? I mean,  
8 you've got literature, do you not, that talk about  
9 how many fibers per cc one gets when they sand  
10 brakes?

11 A I haven't seen anything specific to sanding  
12 automobile brakes. I mean, the highest levels that  
13 I've seen on performing any kind of brake work has  
14 been five fibers per cc.

15 Q You've seen five fibers per cc?

16 A Yes, but it's a peak exposure.

17 Q What publication is that?

18 A I don't remember the particular publication.

19 Q And that's a peak exposure for a few minutes,  
20 15 minutes, what?

21 A A short period of time, right.

22 Q Is it less than 15 minutes?

23 A Yes.

24 Q Is that kind of experience the kind of experience one  
25 gets when they're constantly exposed like one would

1 be at the Taconite Harbor all day long?

2 A Well, even at Taconite Harbor your exposure levels  
3 are going to vary with the activity.

4 Q Sure.

5 A So it -- all -- most environments at least you'll  
6 have a variation of your exposure level depending  
7 upon your activity.

8 THE COURT: We're going to take our morning  
9 recess at this time, ladies and gentlemen,  
10 15 minutes. Why don't you put your note pads on your  
11 chairs. Don't talk about the case, and we'll see you  
12 soon.

13 (Whereupon, the jury was excused.)

14 THE COURT: We're on the record.

15 Mr. Glaccum, you may proceed.

16 MR. GLACCUM: Your Honor, I have what has  
17 been marked as Plaintiff's Exhibit -- or sorry --  
18 Exhibit 50A for identification. It's the video  
19 deposition of Lona Jensen taken September 25th, 2014,  
20 transcript. As the court requested, we have produced  
21 it to attach it to the thumb drive which has already  
22 been admitted into evidence. At this time we'd  
23 request to admit it into evidence.

24 THE COURT: Is this the redacted version or  
25 the unabridged version?

1 MR. GLACCUM: Unabridged, Your Honor.

2 THE COURT: All right. And of course  
3 Exhibit 50 is the actual video itself with  
4 redactions, so if there's ever an appeal, that court  
5 can have a full array of materials to review the  
6 record.

7 Is there any objection to the receipt of  
8 Exhibit 50A as a court exhibit?

9 MR. TIERNEY: No objection as a court  
10 exhibit, Your Honor.

11 THE COURT: All right, it's received as a  
12 court exhibit.

13 We'll go off the record and take our break.

14 (Court stood in recess.)

15 (Whereupon, the following proceedings were  
16 duly had in open court in the presence of the jury:)

17 THE COURT: Mr. DeBlase, you may continue  
18 with your cross-examination.

19 MR. DE BLASE: Thank you.

20 BY MR. DE BLASE:

21 Q Dr. Gregory, this five fibers per cc when you're  
22 talking about the worst possible brake exposure you  
23 can get, that was a peak exposure, right?

24 A Yes, it was a peak. In fact, now that I think about  
25 it, I've actually seen it as high as eight fibers per

1 cc.

2 Q What is that over a time-weighted average?

3 A Well, it depends upon how many brakes you do, and  
4 that study I don't believe indicated that.

5 Q Well, what about with Mr. Humphreys' case, if he's  
6 doing 14 brake jobs total, what kind of time-weighted  
7 average fiber per cc number can we get?

8 A The time-weighted average would be fairly low  
9 compared to doing the insulation-type work that he  
10 was assisting with, including the mixing of  
11 asbestos-containing cement, so it would be low,  
12 relatively speaking, compared to --

13 Q I understand, but we want to give the jurors some  
14 tools to equate the two, so what kind of  
15 time-weighted average fiber per cc -- by the way,  
16 this is a time-weighted average, right?

17 A Yeah.

18 Q What kind of time-weighted average fiber per cc  
19 number can we give to Mr. Humphreys' experience with  
20 brakes?

21 A I can't give one, because I don't know how long it  
22 took him to do the brakes, how many he did under the  
23 circumstances that he performed the brake job. You  
24 know, it's just too many variables that would have to  
25 go into that equation for me to try to give any kind

1 of estimate of what his exposure was, other than to  
2 say it was less than what his exposure would have  
3 been during the insulation activities that he  
4 described.

5 Q Are we talking about a number that starts with a zero  
6 and a decimal point, at least that much, can we  
7 figure that much out?

8 A No, I can't say that either. Again, it's something  
9 that you have to monitor to determine. I mean, it's  
10 going to be above the range of from maybe .01 to up  
11 to maybe one-and-a-half, maybe over an eight-hour  
12 average, but it's going to be low, again, compared to  
13 insulation-related activities, particularly the  
14 mixing of asbestos-containing cements.

15 Q But we just don't have enough information to make any  
16 determination at all as to that?

17 A That's correct.

18 Q What about the joint compound, same thing?

19 A The same thing is true there because he wasn't a  
20 Drywaller, so he was just patching cracks and nailing  
21 holes in a house that he had bought, so he was  
22 working intermittently, both mixing the joint  
23 compound and sanding the joint compound.

24 So I don't know the size of the rooms that  
25 he was doing these things in or how close he was

1 while he was doing the sanding, as well as the mixing  
2 of the joint compound. So his exposure level would  
3 have varied.

4 Q Can you give us some information that is in the  
5 literature concerning joint compound exposures?

6 A Yes. The time-weighted average for a Drywaller, that  
7 I'm aware of, that I think is one of the more recent  
8 ones that was published -- I just can't remember the  
9 name of the author, although I think it was Murdock  
10 -- but the time-weighted average for Drywallers that  
11 included installing the Drywall, mixing the joint  
12 compound and then sanding the joint compound, the  
13 time-weighted average there ranged up to  
14 five-and-a-half fibers per cc, I believe it was.

15 Q And that obviously is a professional Drywaller,  
16 right?

17 A That's correct.

18 Q Not a person doing random patch jobs for a few  
19 minutes, a few hours?

20 A That's correct.

21 Q Whatever the testimony is in this case, right?

22 A That's right.

23 Q That exposure, in your opinion, is significantly less  
24 than his experience at Taconite Harbor?

25 A The exposure that he had as patching holes and



1           patching cracks or the exposure that a Drywaller  
2           would have?

3       Q    His exposure of patching holes, patching cracks.

4       A    Yes, his exposure during the mixing of the  
5           asbestos-containing joint compound would have been  
6           similar to the mixing of asbestos-containing  
7           insulating cements, although I would suspect  
8           significantly lower, but you're mixing a dry powder  
9           material that has a tendency to disperse into the air  
10          easily, but in general, his operation of sanding,  
11          mixing would have been lower -- mixing of joint  
12          compound, sanding of joint compounds -- his total  
13          exposure there would have been less than his exposure  
14          during the same time period for the same duration of  
15          while he was working as an insulator, or as an  
16          insulator helper, excuse me.

17       Q    We went through some of the information that's in the  
18          literature that Mr. Templin talked about in this  
19          case. The numbers that you're giving are lower than  
20          the numbers that he gave for the literature, the  
21          scientific literature with respect to those  
22          operations, is that right?

23       A    Yes, but, I mean, he may be aware of some other  
24          research or some other presentations that I'm not  
25          aware of.

1 Q And the exposures to the joint compound, that's all  
2 chrysotile, right?

3 A Yes.

4 Q And that's in contrast to the Kaylo product which had  
5 a component of amosite in it, right?

6 A During that time period from 1956 to '58, it's my  
7 understanding that Owens-Illinois Kaylo did contain  
8 some amosite in addition to chrysotile.

9 Q And we heard Charlie Ay's testimony on that and we've  
10 seen some interrogatory responses on that. I don't  
11 think that's in dispute. Do you have an  
12 understanding as to the difference in toxicity, if  
13 you will, between the fiber types chrysotile and  
14 amosite?

15 A Yes. The general consensus is that amosite is a more  
16 potent, more potentially toxic form of asbestos as  
17 compared to chrysotile in causing an increased risk  
18 of mesothelioma.

19 Q Can you quantify that?

20 A Well, there's been all types of factors that have  
21 been used for that, so -- none of it has been  
22 scientifically validated, so I'm not comfortable to  
23 even give a range. All I know is the epidemiological  
24 studies have indicated that amosite is potentially  
25 more toxic than chrysotile, and crocidolite is more

1 toxic, potentially toxic, than amosite.

2 Q All right. And crocidolite is not a fiber that's in  
3 play in this case?

4 A As far as we know, that's correct.

5 Q Let's briefly go over what we talked about yesterday.

6 I have my notes here. By the way, you respect

7 Charlie Ay and what he has to say about his

8 experience with insulating materials, right?

9 A Yes, I've read his depositions in the past as well.

10 Q You yourself were never an insulator, right?

11 A No.

12 Q You never applied insulation or worked with it,  
13 correct?

14 A No, but I've worked with raw asbestos as a high  
15 school kid.

16 Q But my question was as to insulation.

17 A No.

18 Q Now, as far as insulation of, thermal insulation,

19 Charlie Ay would be the best person to talk to us

20 about that, right?

21 A Since he was an insulator who installed thermal  
22 insulation, he would be more qualified to talk about  
23 the techniques of installation of thermal insulation  
24 and not me because I was never an insulator, that's  
25 correct.

1 Q And what these things look like, too, right?

2 A He was knowledgeable. He used them in the field  
3 while they were being installed rather than being  
4 removed.

5 Q And you said in your testimony yesterday Kaylo is  
6 white, very, very chalky white. I think you used the  
7 words "very" and "chalky" and "white" like seven  
8 times in your answer. That's a little bit in  
9 contrast to what Charlie Ay said in this case,  
10 because we had the picture of the Kaylo up on the  
11 screen, and he testified that the advertising is  
12 white but it's not as white as that. It's an off  
13 white?

14 A I think he indicated kind of a pinkish white with a  
15 pinkish hew, I believe he indicated.

16 Q Well, the testimony is what it is.

17 A Right.

18 Q We'll talk about that in closing argument. But the  
19 testimony that he gave is about the description of  
20 the product as something that you would respect,  
21 right?

22 A Yes.

23 Q You have no reason to dispute Charlie Ay's testimony  
24 in this case, do you?

25 A That's correct.

1 Q And do you have any -- now, the Mundet mud that  
2 Mr. Humphreys has described working with, that, too  
3 was a chrysotile product, right?

4 A Yes, as far as I know, or as far as the literature  
5 has indicated, yes.

6 Q That product did not have amosite in it, right?

7 A To the best of my knowledge, it did not, but that's  
8 based on what I know from the literature.

9 Q Now, you said -- I didn't think I was going to have  
10 to talk about this, but then it changed. You said  
11 when you were talking about standards, the ACGIH and  
12 other standards, that folks were trying to get the  
13 workplace, if they followed these standards, that  
14 nearly all employees, you said that, nearly all  
15 employees would be safe, or that most people would be  
16 safe. But then you said something towards the end  
17 that said that -- it was more definitive -- that if  
18 you followed these TLVs you would be safe. Is it  
19 more that answer or the answer, most people, or  
20 nearly all?

21 A Well, that was our standard. I mean, industrial  
22 hygienists really refer to that as their bible to  
23 determine whether people were being overexposed or  
24 exposed within safe limits. That was the best  
25 available scientific information that we had. As a

1 young compliance officer running around the plants  
2 sampling employees and coming back with the results,  
3 discussing it with the employees, and they wanted to  
4 know, and their employer wanted to know, are my  
5 people going to be safe, that's what we used. Of  
6 course then it was the permissible exposure levels,  
7 PELs that OSHA had adopted from the ACGIH TLVs, but  
8 they were essentially the same as the original TLVs  
9 although the TLVs changed a little bit. OSHA's  
10 changed as well.

11 Q Let's get back to my question. My question is, those  
12 standards, the ones that were not, you know,  
13 enforceable by government, the ACGIH standards, and  
14 then thereafter the ones that were enforceable by  
15 government, the OSHA standards, all of those  
16 standards throughout time have never said that  
17 following these standards you're going to be safe,  
18 have they?

19 A Yes, they've said that nearly all people exposed  
20 below those levels will not suffer adverse health  
21 effects.

22 Q And we've all seen the ACGIH -- I'm not going to put  
23 that back on the screen -- from 1948. I'm sure  
24 you've seen it, too, from the tenth transactions,  
25 right?

1 A I don't know which one you're referring to.

2 Q And then thereafter literature in OSHA when they're  
3 describing these standards, they're talking about it  
4 in terms of even at these standards people are going  
5 to get sick, right?

6 A Well, when OSHA established their PELs they were  
7 mandated by Congress and the Supreme Court to  
8 promulgate and enforce the most protective health  
9 standards that they could promulgate, and they have  
10 been tested many times. Like I said, the Supreme  
11 Court said you will produce and enforce the most  
12 protective standard to prevent material impairment of  
13 health for all working Americans.

14 Q Understood, but let's get back to my question. And  
15 that is, that even at that standard for all the world  
16 to see when we're talking about what the standard is  
17 and what it does and what it purports to do, that  
18 even at that standard -- and it's changed over time  
19 -- but even at the standard at whatever time, if you  
20 expose somebody below that standard, they tell  
21 everybody people are still going to get sick, don't  
22 they?

23 A I'm not aware of them saying that other than to say  
24 that there are some hypersensitive individuals who,  
25 for one reason or another -- maybe it's the

1 particular medication that they're on, or maybe they  
2 smoked cigarettes -- that interferes with the body's  
3 defense mechanisms, but some of those people have a  
4 challenged system that makes them more susceptible to  
5 concentrations of chemicals as opposed to someone who  
6 does not have those types of hypersensitivities or  
7 weakened autoimmune or defense mechanisms.

8 Q None of that's a factor in this case, is it?

9 A I don't know that it is. I'm not a medical expert on  
10 that so I can't really give you an opinion.

11 Q Let's stick with industrial hygiene. Let's talk  
12 about what's in the literature, what the standards  
13 are, because you talked about that on direct, what  
14 the standards are. Let's talk about what that means  
15 to folks that are looking at it at the time. At the  
16 time of the 1950s, we didn't have OSHA, we're looking  
17 at the ACGIH, right?

18 A That's correct.

19 Q That wasn't enforceable, nobody could get a ticket  
20 for violating the ACGIH standards, they were  
21 recommended standards, but even in those standards  
22 they said that this is a rough guesstimate pretty  
23 much, right?

24 A No, I don't recall anyone saying it was a rough  
25 estimate. And some states did adopt those as



1 regulations, the TLVs.

2 Q Understood. Now, when we moved to OSHA, OSHA tells  
3 folks that even at this level, even at today's level,  
4 .1 fibers per cc, which is extremely low compared to  
5 the past, right?

6 A Yes.

7 Q Even at .1 fibers per cc, folks will still get  
8 cancers?

9 A Well, what they say is OSHA's acceptable risk is less  
10 than one person per thousand that will develop a  
11 disease for any of their occupational health  
12 standards, and they say that with the current  
13 standard, in addition to the permissible exposure  
14 limit but all the work-practice requirements that are  
15 in that, if all of those are implemented and  
16 maintained there will be no significant risk of  
17 material impairment of health.

18 Q Right. They're trying to prevent -- that's what  
19 they're trying to do -- they're trying to prevent  
20 asbestosis, and they think that that .1 level will  
21 prevent asbestosis, right, can we agree on that?

22 A I don't know how we got on asbestosis. I was talking  
23 about asbestos-related diseases including  
24 mesothelioma and lung cancer.

25 Q Let's start with asbestosis. They're trying to

1 prevent asbestosis at the .1 level, right?

2 A They're trying to prevent mesothelioma at the .1  
3 level.

4 Q Can we just start with asbestosis. We'll get to  
5 mesothelioma.

6 A Right.

7 Q Asbestosis, trying to prevent?

8 A That would prevent --

9 Q Prevent asbestosis at .1, right?

10 A That would prevent it, yes.

11 Q And OSHA says -- have you read the regs for OSHA?

12 A Yes, the 1994 was the last regulation, yes.

13 Q So the regs say right in there that we're trying to  
14 prevent asbestosis but this will not prevent excess  
15 cancers, does it not say that? You want me to pull  
16 it out?

17 A It says it will reduce cancers to, I believe the  
18 exact language is three per thousand. Their target  
19 is one per thousand, but the rest of the regulation,  
20 the work-practice controls that are also required in  
21 a regulation, will bring that risk within one per  
22 thousand, and that any significant reduction in the  
23 permissible exposure level will not increase the  
24 safety to the employee or decrease the risk of  
25 material impairment.

1 Q I just want to make sure I'm clear. At the .1 fiber  
2 per cc level, which is today's standard, you're  
3 saying that's -- that OSHA believes that that's going  
4 to prevent cancers?

5 A That, in addition to the rest of their work-practice  
6 requirements, which are also part of their asbestos  
7 standard.

8 Q Okay. At the time of the 1950s, did folks -- well, I  
9 think we've beaten that subject enough. Let's move  
10 on.

11 We talked a little bit -- or you talked a  
12 little bit about toxic and nontoxic, the definition  
13 -- you were shown some documents. If there was some  
14 testimony in this case about what somebody who  
15 actually worked at the company, how they defined  
16 toxic and nontoxic, is that something that you would  
17 consider to be important in terms of understanding  
18 what folks were thinking at the company at the time  
19 about what the definition of those words means?

20 A Well, the definition varied a little bit depending  
21 upon the individuals. I gave you the general  
22 consensus as far as the definition of toxic versus  
23 nontoxic.

24 Q It's a technical kind of thing?

25 A Right.

1 Q You're not saying by putting up those documents, that  
2 asbestos was considered nontoxic up and through the  
3 '70s, you're not saying that it was considered not  
4 harmful to health through the 1970s, are you?

5 A No, I'm just saying that the definition on toxicity  
6 changed with time, and during that time it was not  
7 considered a toxic mineral dust. It was considered  
8 just a mineral dust.

9 Q According to their defining scheme, right?

10 A During that time period, that's correct.

11 Q And we're talking about the '70s, right?

12 A Before the '70s.

13 Q Well, for somebody who's an insulator or a customer  
14 who's not looking at these documents that you showed  
15 the jury, and looking at just the normal definitional  
16 sense of the word in the 1950s, that could be  
17 different than what you're talking about in terms of  
18 toxic, nontoxic, right?

19 A No, that was the general definition during that time  
20 period before it was changed, that toxic referred to  
21 systemic materials that were absorbed into the body  
22 and it traveled to remote or systemic locations  
23 within the body rather than causing harm right at its  
24 initial origin or its -- where it initially entered  
25 the body.

1 Q So you're saying that the definition of toxic, at  
2 least up through the 1970s, was toxic meant that if  
3 it touched your body you'd get an immediate type  
4 reaction, versus nontoxic which you'd take it into  
5 your body and maybe you'd get hurt a little time  
6 later?

7 A Well, toxic was that it was a systemic material that  
8 would travel through your body and then attack or  
9 damage target organs, and the mineral dust was a dust  
10 that stayed pretty much where it entered. If it  
11 entered the lungs, it stayed in the lungs. It wasn't  
12 absorbed into the bloodstream; it wasn't carried to  
13 other parts of the body, but eventually that  
14 definition was changed and the definition became -- a  
15 toxic material was any material that could cause  
16 damage to the body if it comes in contact with the  
17 body or travels through the body.

18 Q But before that time -- let's get to the bottom of  
19 this -- before that time is it your point that while  
20 asbestos was considered to be harmful to the body --  
21 you agree with that, asbestos is harmful to the body  
22 because it can cause asbestosis and cancer, and folks  
23 knew that in the 1950s, right, 1955 and thereafter,  
24 right?

25 A In 1955, with the Richard Doll study, which was a

1 very well done epidemiological study, that was an  
2 indication that overexposure to asbestos could cause  
3 lung cancer, that's correct.

4 Q Right, so that's harmful to the body, right?

5 A Right.

6 Q So you're saying that still is somehow not toxic  
7 because of some technical definition, just to be  
8 fair, right?

9 A Right, the definition of toxicity at that point was  
10 that it had to be a systemic poison. It had to be  
11 like arsenic lead, entered the body through the lungs  
12 or through the intestinal tract or through the skin  
13 and then traveled to other parts of the body. It's  
14 just a difference in definition.

15 Q A difference in defining things?

16 A Right.

17 Q So folks in the sciences, you know, might have had  
18 this hierarchy of what is toxic and nontoxic, but for  
19 the average Joe, let's say, working at Owens-Illinois  
20 and the average Joe looking at an advertisement,  
21 toxic and nontoxic mean other things, right?

22 MR. COSMICH: Object; calls for speculation  
23 as to what it may mean to somebody else.

24 THE WITNESS: Yeah.

25 THE COURT: Witness can answer. Overruled.

1 THE WITNESS: I wouldn't know how other  
2 people, your average Joe, at that time probably would  
3 be familiar with the definitions of toxic versus  
4 nontoxic.

5 BY MR. DE BLASE:

6 Q Exactly. So a fellow working at Owens-Illinois  
7 explained to folks what, in a deposition, what was  
8 meant by toxic or nontoxic in the 1950s is giving you  
9 the straight scoop on what he meant at OI in the  
10 1950s?

11 A That was his interpretation of what toxicity was at  
12 that point, yes.

13 Q Okay. Let's talk about your work with Eaton, okay.  
14 That was the defendant you did work with, that  
15 particular defendant was an employer in an asbestos  
16 case. Do you remember giving testimony -- let me  
17 just ask you a question. Forget about this testimony  
18 stuff, this lawyer stuff. Let me just ask a  
19 question.

20 In performing the work for the various  
21 companies that you've performed work for, have you  
22 specifically come to opinions that the supplier of  
23 asbestos material must rely upon the manufacturer to  
24 tell them when the product is unsafe?

25 A That's one source of information, and it's required

1 by the OSHA Hazard Communication Act since the early  
2 1980s.

3 Q And that was one source of information in the 1950s  
4 as well, right?

5 A It was not required in the 1950s.

6 Q Understood. There were no laws requiring them to do  
7 anything in the '50s?

8 A Right.

9 Q I'm talking about your answer, and that is it's one  
10 source of information?

11 A That's one source of information. There are many  
12 other sources of information.

13 Q And from an industrial-hygiene standpoint, employers  
14 have a -- have come to rely upon product suppliers to  
15 provide information on product safety, true?

16 A That's one source of information, sure, one of many  
17 but you can't just go on one source. In that  
18 particular case the company was given misinformation  
19 about the product that they were being supplied.

20 Q Let's talk about that. So obviously information that  
21 is received or put out by the company needs to be  
22 accurate, right?

23 A That's correct.

24 Q And you believe from an industrial-hygiene standpoint  
25 that it would be wrong for a manufacturer to give



1 misinformation about its product, right?

2 A That is wrong, yes. Yes, I do agree with that.

3 Q And when you're giving that opinion, you're giving  
4 that opinion not just as a scientist but also as a  
5 professional involved in safety, correct?

6 A That's correct.

7 Q Because an industrial hygienist is a person who is  
8 involved in safety, right?

9 A Not all of them, but I was because I was certified in  
10 safety as well.

11 Q And from an industrial hygiene and logic standpoint,  
12 manufacturers are in the best position to know  
13 precisely what materials are contained in the  
14 products they produce, right?

15 A Yes, a manufacturer of a product does know, since  
16 they obviously manufacture the product, they know  
17 exactly what's in that product.

18 Q And manufacturers are in the best position to let  
19 others know what's in their product?

20 A Yes, if they sell their product, of course they can  
21 tell others what's in their product.

22 Q And manufacturers are in the best position to test  
23 their own product, true?

24 A They're in the position to test it as well as anyone  
25 else could test it. Users can test it. The

1 universities can test it; the government can test it,  
2 of course.

3 Q You could test it?

4 A That's right.

5 Q Manufacturers are in the best position to understand  
6 the hazards that are particular to their own product,  
7 correct?

8 A Not really, because the hazard depends upon exposure,  
9 and exposure is -- depends upon the usage, in other  
10 words, the environment that it's used in, how much  
11 you're using, how often you're using it, and the way  
12 you're using it, essentially.

13 Q Is there anything that would prevent a manufacturer  
14 from testing all those things that you just said?

15 A Yes, because I'm not aware of manufacturers who can  
16 walk into the job site and put a sampling pump on an  
17 employee to monitor their exposure level. Even as an  
18 OSHA compliance officer I carried a federal badge and  
19 I had trouble getting into some situations with some  
20 employers and testing the environment that the  
21 employees were exposed to.

22 Q But a manufacturer could do the best it could to test  
23 what it perceived to be the end users' use of the  
24 product, couldn't it?

25 A The employer is in the best position since they

1 control the people. For example, as an OSHA  
2 compliance officer, I ran into several employees who,  
3 despite me telling them who I was and why I wanted to  
4 monitor their exposure, they didn't want to wear a  
5 pump. So I had to go to their bosses and ask them to  
6 please ask that employee to wear my sampling pump so  
7 I could find out what they're being exposed to.

8 Q Manufacturers are in the best position to provide  
9 information about their product, true?

10 A As far as the content of their product, they know  
11 better than anyone else what the content is, the  
12 percentage of different types of material that goes  
13 into their products.

14 Q Manufacturers are in the best position to  
15 communicate, right on their own packaging,  
16 information about any hazards related to their  
17 products that they know?

18 A Manufacturers can't really communicate hazards  
19 because hazards depend upon exposures.

20 MR. DE BLASE: I'll object as not  
21 responsive, Your Honor. It really calls for a yes or  
22 no.

23 THE COURT: Overruled. The next question.  
24 He answered your question.

25 MR. DE BLASE: Got it. Okay.

1 BY MR. DE BLASE:

2 Q And from an industrial-hygiene standpoint, one of the  
3 ways an end user may receive information about the  
4 hazards of a product is by way of information  
5 contained on the packaging of that product, true?

6 A No, because hazard depends upon exposure and working  
7 conditions, and you can't indicate that on a package  
8 because you don't know how the material is going to  
9 be used once you sell it to a user, and you don't  
10 know how often it's going to be used, how much of it  
11 is going to be used, the environmental conditions  
12 under which it's being used. So you really don't  
13 know whether or not that's going to be a hazard to  
14 the employees of that employer.

15 Q If a manufacturer has a strong suspicion that a  
16 certain disease will result through the normal use of  
17 its product, is that something that should be  
18 contained on the packaging of the product?

19 A If a manufacturer knows that their product and the  
20 way it's going to be used in the workplace is going  
21 to result in a disease to employees, then yes, a  
22 manufacturer should put that on the product or on  
23 some kind of technical information sheet that goes  
24 along with the product if they know that information  
25 is accurate. In other words, you use this product,

1           you're going to get sick.

2       Q    If we're talking about a product that, let's say,  
3           doesn't have a track record, is a fairly new product,  
4           is a manufacturer in the best position to provide end  
5           users information that it actually knows or even  
6           suspects about that product?

7       A    No, I think the user is in the best position because  
8           they know how much they're going to use, where  
9           they're going to use it, how often they're going to  
10          use it. All of those constitute exposure, and it's  
11          exposures, overexposures that increase the risk of  
12          occupational diseases.

13      Q    I think you testified to this before, but a  
14          manufacturer obviously is in the best position to let  
15          others know and the consumer or the end user know  
16          what materials are in the product, right?

17      A    That's correct.

18      Q    And so if a product had a material that was known to  
19          cause a specific disease but folks didn't know  
20          whether that material was actually in the product, is  
21          that something that the manufacturer is in the best  
22          position to let the end user know?

23      A    If a manufacturer knows that the use of the product  
24          will result in disease, then the manufacturer should  
25          tell the employer, but the employer has the

1 obligation of determining whether or not a  
2 potentially hazardous material is actually going to  
3 be a hazard to their employees, and that depends on  
4 exposure which is duration and frequency of use as  
5 well as quantity of use.

6 Q What is the best way to make sure that any  
7 information that a manufacturer wanted to provide  
8 about its product to ultimately get to the end user?  
9 Is it communicating with the employer, communicating  
10 with the distributor, communicating with a number of  
11 people, or is it just putting that information on the  
12 packaging so that when it's cracked open and used it  
13 can be read by the end user?

14 A Well, again, since a hazard depends upon exposure  
15 level, duration frequency of use, how it's used in  
16 the workplace, the environment it's used in, in my  
17 opinion, the employer has the obligation as soon as  
18 they hire someone to make sure they're not using  
19 anything that's going to cause adverse health effects  
20 to those employees. And they can do that by going  
21 to, in those days before the Internet, going to the  
22 library and researching that information, or they can  
23 contact their suppliers and get that information, or  
24 they can contact the local universities, government  
25 officials and those types of sources of information.

1 Q Sure, they could do all that. So the answer to my  
2 question is the former, not the latter, right?

3 A I'm sorry?

4 Q In other words, the latter is not putting that label  
5 on, just going ahead and letting the distributor  
6 know, let the employer know about these things,  
7 that's the best way?

8 A No, I'm saying it's the employer's responsibility to  
9 find out what their people are using, potential  
10 hazards of what they're using, monitor the  
11 environment with IH monitoring and determine what  
12 their employees are exposed to and if they are  
13 overexposed, implement controls immediately.

14 Q Understood. What's easier in terms of making sure  
15 that the hazards of a product end up with an end  
16 user, putting something on the packaging of the  
17 product, or contacting an employer to let that  
18 employer know what the hazards are in the product?

19 A The most effective means is for the employer to take  
20 the responsibility of evaluating their workplace and  
21 the chemicals that their employees are working with  
22 to determine what their potential hazards might --

23 Q So an employer should then undertake, when they  
24 purchase a product to be used in the workplace, to  
25 undertake testing of that product, do destructive

1 testing of that product, to even first figure out  
2 what's in the product, then to determine whether or  
3 not that is a hazard to the body, and then do other  
4 sorts of testing, that's the best way to go about  
5 letting folks know, the end users know, about  
6 something that the manufacturer actually knows, is  
7 that what you're saying?

8 A No. The user of a product has the obligation to know  
9 what they're using, and when your name is Asbestos  
10 Products, Incorporated, you know you're using  
11 asbestos. And you need, since you've hired that  
12 person, you're paying for their labor, you need to  
13 find out what the potential health hazards of  
14 asbestos are, and you need to monitor your people and  
15 find out that they're not being exposed at excessive  
16 levels. And if they are you need to protect them  
17 with the various controls that we discussed earlier.

18 Q You're saying that the manufacturer has no role in  
19 that whatsoever?

20 A I'm saying if the manufacturer knows that a  
21 particular use of their product is going to result in  
22 a disease or an injury, then that manufacturer does  
23 need to contact that end user to let them know if  
24 they have that information available. But since they  
25 don't know how often and how much of their product



1 and under what circumstances they're going to be  
2 used, they don't know what their exposure level is,  
3 you know.

4 Q So let her rip, right?

5 A No. I'm just saying if you sell someone a product  
6 and they're going to keep it in the box and not use  
7 it, there's no exposure. If they're going to use it  
8 a few times, there's less exposure. If they're going  
9 to be using it constantly, the exposure level is  
10 higher. So the manufacturer who controls the people,  
11 the conditions, and has all the resources, they have  
12 the ability to evaluate that person's exposure and  
13 make it safe and make it healthy for that employee.

14 And I did that as a compliance officer  
15 before there were MSDS's. I went to the library --  
16 it's available to anyone -- and looked up the  
17 information on chemicals long before any of that  
18 information was produced in material safety data  
19 sheets to make sure that I was sampling for the right  
20 things and monitoring in the right ways to ensure  
21 that those employees were not overexposed in the  
22 workplace.

23 Q Thank you very much, doctor.

24 A You're welcome. Thank you.

25 THE COURT: Redirect?

REDIRECT EXAMINATION

BY MR. COSMICH:

Q Dr. Gregory, briefly, when you put the -- you gave us ranges of exposure for thermal insulation. That was not specific to Kaylo, was it?

A No, that was not.

Q In fact, these activities that were studied involved thermal insulations, it involved more asbestos than Kaylo?

A That's correct, and those were not eight-hour averages. Those were concentrations during the actual handling of asbestos and not what their eight-hour average was.

Q You were asked about products with a track record. Would you agree that prior to 1948 there was a track record for asbestos?

A Oh, yes, there was.

Q And folks before 1948, when Kaylo was commercially produced and sold, there was a track record for how to control exposures to asbestos?

A Yes, there was, the engineering controls that I discussed earlier.

MR. COSMICH: That's all I have for you, Dr. Gregory. Thank you.

THE WITNESS: Thank you.

1 THE COURT: Mr. DeBlase?

2 MR. DE BLASE: Yes, Your Honor.

3 RECROSS EXAMINATION

4 BY MR. DE BLASE:

5 Q The time-weighted average that we're talking about, I  
6 think you said this, but with respect to the joint  
7 compound, that in your mind is a significant -- you  
8 won't put a metric on it but it's significantly  
9 substantially less than in Mr. Humphreys' experience  
10 at Taconite Harbor, right?

11 A Right. During the time period that he was an  
12 insulator helper his exposure levels would have been  
13 higher than when he was sanding joint compound that  
14 had contained asbestos.

15 Q And we talked about a track record for a product.  
16 The Kaylo product, do you understand the history of  
17 the Kaylo product?

18 A Well, I mean, from the litigation activity that I've  
19 been involved with, I understand a lot of it, yes.

20 Q Okay. So that was a new product that they were  
21 manufacturing, right?

22 A It was a new product to them, but asbestos-containing  
23 insulation had been around many, many years before  
24 they started producing it.

25 Q Understood. But that product was new to

1 Owens-Illinois, thermal insulation was new to

2 Owens-Illinois, right?

3 A That's correct.

4 Q And thermal insulation, the way they manufactured it  
5 so it would be nice and light, calcium silicate with  
6 asbestos, that was new to Owens-Illinois and it was a  
7 brand new product, right?

8 A Yes, that's my understanding.

9 Q And so that information is information that would  
10 have been beneficial, the results of any testing that  
11 they did would be beneficial to folks who are end  
12 users, employers, would it not?

13 A No. I think anyone that was using insulation  
14 products knew it contained asbestos and knew that --  
15 or not all of them knew that there were TLVs that  
16 dealt with permissible exposure levels to asbestos,  
17 but in that time period I know, based on all the  
18 depositions that I've read of insulators, they all  
19 knew that they were using asbestos, and most of them  
20 were members of the Asbestos Workers Union. So they  
21 had knowledge that they were using asbestos.

22 Q Well, we have a new product though that's being  
23 tested for adverse health effects by a company  
24 spending money to do these tests. They're not doing  
25 it because it's already known, right?

1 A Well, they were testing their product, but the  
2 asbestos that was used in it had been tested many,  
3 many times before, so there was no new information  
4 that they were going to obtain by testing as far as  
5 asbestos was related.

6 Q Who tested this product before?

7 A Well, all the epidemiology studies that have been  
8 done on exposures to asbestos and the fact that it  
9 caused asbestosis beginning way back in 1930.

10 Q Okay, you're talking about asbestos, you're not  
11 talking about a specific product, right?

12 A I'm talking about asbestos. Asbestos was contained  
13 in the Kaylo product.

14 Q Are you aware of any product that was actually  
15 tested, or is this the first one that you're aware  
16 of, this Owens-Illinois Kaylo, that was tested and  
17 you got results from?

18 A I don't know if there were other tests performed on  
19 calcium silicate or other forms of  
20 asbestos-containing insulation. I don't know if any  
21 of those studies were done as far as animal testing  
22 or anything like that, but certainly from 1930 on up  
23 epidemiology studies were performed on people that  
24 were working with asbestos.

25 Q Well, wouldn't it be beneficial to folks, to

1 employers, who may have been confused about the  
2 constituency of a particular product, to have that  
3 information, that testing result?

4 A I think every insulation contractor in the country  
5 knew they were using asbestos during that time  
6 period.

7 Q Let me ask you a question: With regards from an  
8 industrial hygienist's point of view, you believe  
9 that employers were confused about asbestos and the  
10 asbestos standards as it applied to them until the  
11 late 1970s, true?

12 MR. COSMICH: Objection, beyond the scope  
13 of the redirect?

14 THE COURT: Overruled.

15 THE WITNESS: I'm sorry.

16 BY MR. DE BLASE:

17 Q I'll read it again. With regards from an industrial  
18 hygienist's point of view, you believe that employers  
19 were confused about asbestos and the asbestos  
20 standards as it applied to them until the late 1970s,  
21 true?

22 A Yes, because employers didn't know whether they had  
23 to implement certain parts of the standard. For  
24 example, medical monitoring was never defined until  
25 the later '70s, and the original standard in 1970

1 just listed a PEL -- 1971 was the first standard --  
2 listed a PEL. 1972 required that you do monitoring  
3 for asbestos, but it didn't indicate whether you did  
4 monitoring if you used asbestos once a year or if it  
5 was just in the workplace, or when you had to do  
6 monitoring. Later on OSHA defined that and said that  
7 anyone using asbestos where it could possibly be  
8 released into the air had to do initial monitoring to  
9 find out what their employees were exposed to to  
10 ensure that their levels were within the OSHA  
11 permissible exposure limits. That was the confusing  
12 issue, and I was one of the ones going around trying  
13 to straighten that out with a lot of the  
14 manufacturers.

15 MR. DE BLASE: That's all I have. Thank  
16 you, Your Honor.

17 THE COURT: Anything further?

18 MR. COSMICH: Nothing further, Your Honor.

19 THE COURT: All right, Dr. Gregory, you can  
20 step down. Thank you.

21 THE WITNESS: You're welcome.

22 MR. COSMICH: May I consult with Mr.  
23 Tierney real quick, Your Honor?

24 THE COURT: Sure.

25 MR. COSMICH: Your Honor, the defense

1 rests.

2 THE COURT: All right, any rebuttal?

3 MR. DE BLASE: No, Your Honor.

4 THE COURT: All right, want to approach?

5 (Off-the-record discussion.)

6 THE COURT: Ladies and gentlemen of the  
7 jury, both sides have rested so we've completed the  
8 evidence phase of the case. Because of preparations  
9 that we need to make in order to smoothly present the  
10 case to you, including the final drafting of the  
11 instructions that you're going to be given, you're  
12 getting this afternoon off. That means the case will  
13 be submitted to you first thing Monday morning.

14 So leave your note pads here. Remember all  
15 the instructions I've given you about your conduct.  
16 It's always important that you follow those  
17 instructions. It's even more important now because  
18 we'd hate to have to start over. So please follow  
19 all the instructions that the court has given you and  
20 enjoy your weekend. Don't forget your juror badges  
21 on Monday.

22 (Court stood in recess.)  
23  
24  
25



CERTIFICATE

I, Kathleen M. Conlee, one of the Official  
court reporters in and for the District Court of the  
Second Judicial District, State of Minnesota, do  
hereby certify that the foregoing transcript  
constitutes a full, true and correct record of the  
proceedings had in the matter of State of Minnesota  
versus Neil Humphreys, Lona Jensen, individually and  
as husband and wife vs. Owens-Illinois, Inc., as  
taken at the time and place stated herein.

Dated: November 12, 2014

/s/ Kathleen M. Conlee

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Kathleen M. Conlee  
Official Court Reporter  
15 West Kellogg Boulevard - #1530  
St. Paul, MN 55102  
(651) 266-9191